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Council of the County Palatine of Aurham.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

T. EUSTACE HILL, M.B., B.Sc., F.I.C.,

INCLUDING A

Summary of the Annual Reports of the District Medical Officers of Health,

AND OTHER RECORDS,

FOR THE YEAR 1895.

Durbam:

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THE COUNCIL OF THE COUNTY PALATINE OF DURHAM.

To the Chairman and Members of the Health Committee.

GENTLEMEN,

I have the honour to present to you my fifth Annual Summary of the Reports of Medical Officers of Health in this Administrative County.

The summary is compiled according to the arrangement followed in previous years, the health report of each sanitary district being separately dealt with, and I have again preceded the summary with a brief report in which are reviewed the chief vital statistics of the County for 1895, as well as other matters of public health interest which appear to me to be deserving of special notice.

Annual reports were received from every sanitary district in the county, and with few exceptions the reports were in my hands by the end of March. They are mostly printed, and those for the urban districts of Blaydon, Southwick, and Whickham are printed for the first time, as are also the reports for the recently created urban districts of Hetton-le-Hole and Tanfield. The following reports were not printed, and it is to be regretted that the Stanhope Urban and the Weardale Rural District Councils, who last year ordered their medical officers' reports to be printed, have evidently failed to recognize the value of a printed health report as compared with one in manuscript:

URBAN.

Houghton-le-Spring. Ryton (type written).

Stanhope. Tow Law.

RURAL.

Houghton-le-Spring (2 reports). Weardale (4 reports).

The vital statistics of three of the reports (Tanfield and Hetton urban and Chester-le-Street rural) are not complete owing to the present medical officer of health not having held office the whole of the year. Unfortunately, also, the statistics of a few other reports have not been prepared with as much care as is desirable, and but for your Committee having made arrangements by which I receive from the registrar's returns of births and deaths from every sanitary district in the administrative county, the tables at the end of this summary would not be complete.

The year 1895 compared very unfavourably, from a public health point of view, with its predecessor, the general and zymotic death-rates being 2.0 and 0.59 per 1,000 population respectively higher than in 1894, but just as I pointed out in last year's report that the low death-rate could not be wholly attributed to the improvements in the sanitary condition of the county, but was largely the result of favourable climatic condition, so, during 1895, the increased mortality was to a great extent caused by the hot dry weather of September, which was particularly favourable to the fatal prevalence of diarrhœa among young children, though it must not be forgotten that infantile diarrhœa is a preventable disease which, whatever the climatic conditions, would not, but for faults of domestic or public hygiene, ever obtain epidemic proportions.

The County of Durham again attained the unenviable distinction of having a higher death-rate from typhoid fever than any other county in the country, and the fact that this disease is preventable, and the result of the existence of insanitary conditions more or less patent, is evidence that your Committee's labours for the improvement of the health of the county are by no means ended.

In the accompanying report I have briefly summarized the sanitary work of the County Council from its inception down to the end of 1895, and in all subsequent annual reports I propose to give a short resumé of the work accomplished each year by the County Health Committee and the officers of the Health Department.

I take this opportunity of tendering my best thanks to the medical officers of health and sanitary inspectors throughout the county for the assistance they have always been willing to render me in my work, and it is pleasant to me to state that in my official intercourse with the district health officers, I have never had the slightest friction. The returns of infectious disease which the former continue to voluntarily forward to me are of very great value in affording information of the distribution of these diseases throughout the county, and every month a summary of these returns is forwarded to each medical officer of health.

I remain,

Your obedient Servant,

T. EUSTACE HILL.

June, 1896.

THE ADMINISTRATIVE COUNTY.

Sanitary Districts and Administration.

During the year the Local Government Board confirmed the orders made by the County Council by which urban districts were constituted at Tanfield (population 6,880), in the Lanchester Union, and at Hettonle-Hole (population 12,726) in the Houghton Union. The sanitary districts in the administrative county now number 28 urban, 14 rural, and 2 port. The County Council has also made an order constituting an urban district at Annfield Plain, in the Lanchester Union, but the order has not yet been confirmed by the Local Government Board. The only changes among the medical officers of health during 1895 were in the Stockton urban and Chester-le-Street rural districts, Drs. Horne and Taylor being appointed in the place of Drs. Clegg and Duncan, who resigned. Drs. Adamson and Benson were respectively appointed medical officers of health of the newly-formed Hettonle-Hole and Tanfield urban districts. Dr. Henry Armstrong resigned his position as medical officer of health to the River Tyne Port, but continued in office to the end of the year. Changes in the staff of inspectors of nuisances have been made during 1895 at Blaydon, Felling, Hebburn, Houghton, Southwick, Spennymoor, and in the Sunderland rural district, and additional inspectors have been appointed at Spennymoor, and in the rural districts of Auckland, Lanchester, and Sunderland.

Population.

The estimated population of the administrative county at the middle of 1895 was 764,980, or an increase of 10,486 as compared with the estimated population of mid-year 1894. The estimated population of the urban districts was 426,109, and of the rural districts 338,871. In several health reports the vital statistics are calculated on the last census population, and in others the estimate appears to have been roughly calculated according to no recognised method. In an increasing number of reports, however, the population is estimated by multiplying the number of occupied houses in the district by the average number of persons occupying each house at the time of the last census, and this is probably the most accurate method of calculating the population in any intercensal year. It is most essential that the estimated population should be as correct as possible, as the accuracy of the birth and mortality rates is entirely dependent on it, and it is most desirable that the census should be taken every five years.

Births.

These numbered 27,784, or an increase of 1,121 as compared with 1894, and were equal to a birth-rate of 36.3 per 1,000 population, or 2.3 per 1,000 higher than in the previous year. In the urban districts the birth-rate was 34.6 (the rate in the boroughs being only 32.1), while in the rural districts it was 38.0. As in previous years, the county

birth-rate very greatly exceeded that for England and Wales, which was only 30.3. The highest birth-rates were in Seaham Harbour (42.1), Hetton-le-Hole (41.4), and in the rural districts of Sunderland (42.4), and Easington and Chester-le-Street (40.5), while the lowest rates were in Barnard Castle (23.9), Darlington (29.0), and in the rural district of Darlington (21.1).

Deaths.

The deaths, which numbered 14,730, were more by 1,675 than it 1894. The general death-rate was 19'2 per 1,000, or 2'0 per 1,000 higher than in the previous year, but 0'8 lower than in 1893. The county death-rate exceeded that for England and Wales by 0'5 per 1,000, the rate in the urban districts being 19'1 (boroughs 17'8), and in the rural districts 19'4.

The following table compares the death-rates for the county, and for its urban and rural districts during the past five years, with those for England and Wales:—

	1891.	1892.	1893.	1894.	1895.
England and Wales	20.2	19.0	19.2	16.6	18.7
Administrative County	20.5	18.4	20.0	17.2	19.2
Urban Districts	20.8	18.4	19.5	16.9	19.1
Rural Districts	20.1	18.5	20.5	17.7	19.4

The districts with the highest death-rates were

Houghton-le-Spring (23.8), Spennymoor (22.5), and Felling (22.3) among the urban; and Sunderland (20.8) and Sedgefield (20.5) among the rural.

The lowest death-rates were 11'8 in Ryton, 15'5 in Darlington, 16'2 in West Hartlepool, and 13'1 in the Hartlepool and 14'4 in the Darlington rural districts.

The largely increased mortality in the county was almost entirely among children under the age of five years, and was largely the result of the fatal prevalence of diarrhœal affections during the hot weather of August and September.

The percentage of uncertified to total deaths in the county was 4.5. In England and Wales the percentage was only 2'3. In my last quarterly report (March, 1896), I referred at length to the causes of the large proportion of uncertified deaths, and showed that it was entirely due to the extensive prevalence of unqualified medical practice in certain districts. Thus in Spennymoor last year, 33 per cent. of the deaths were uncertified, owing to attendance by unqualified practitioners, while in Hetton, Blaydon, and the Chester-le-Street rural district the proportion of deaths uncertified from the same cause was very large. The County Council have called the attention of the Local Government Board and the General Medical Council to the dangers to the public health of such practice by unqualified medical men, and in the interests of the community it is to be hoped that it can be suppressed.

Infant Mortality.

The large number of deaths among young children was by far the most unsatisfactory part of the county statistics, for 994 more children under the age of one year died than in 1894. This had the effect of raising the infant mortality-rate, or deaths among children under one year per 1,000 births, from 149 in 1894 to 179, which is an extremely high rate and very greatly in excess of the rate for the country generally (161). In the boroughs the rate was only 169, but in the other urban districts of the administrative county it was as high as 198. In no less than 9 urban districts did the rate exceed 200 per 1,000 births, but in no rural district was the rate so high. The highest infant mortality-rates were in Spennymoor (234), Stanley (241), and Felling (225), the highest rate in any of rural districts being 199 in Sedgefield. There are many causes contributing to the high infant mortality that so often obtains in the populous districts of this country. No doubt the chief cause of it in a year like 1895 was the fatal prevalence of summer or infantile diarrhœa, a specific disease which though requiring a certain temperature to render its germs active, would never attain epidemic proportions but for insanitary surroundings, improper feeding, and neglect. The medical officers of health for West Hartlepool and the Sunderland rural district also refer to infant insurance as having some relation to infant mortality. The removal of conditions which cause pollution of

the soil and air in the neighbourhood of dwellings, and the education of the people in the principles of domestic hygiene are the only means by which the high infant mortality-rate of the country can be permanently lowered.

Zymotic Diseases.

The number of deaths from the seven chief zymotic diseases was 2,060, and the death-rate 2.69 per 1,000, as compared with 1,617 deaths and a death-rate of 2.1 per 1,000 in 1894. For the country generally the death-rate was 2.14, which is considerably below the county rate. But for the very large mortality from summer diarrhæa, which was responsible for 655 more deaths than in 1894, the zymotic death-rate would have been fairly satisfactory and below the rate of previous years. The highest zymotic death-rates were in Stockton (4.5 per 1,000), Brandon (4.2), Seaham Harbour (4.0), and 3.7 in the Sunderland and Hartlepool rural districts. In Durham (0.93), and in the rural districts of Barnard Castle and Weardale the zymotic death-rate was under 1.0 per 1,000.

In the following table the chief vital statistics of the administrative county and of its urban and rural districts are compared with those of England and Wales:—

1895.	Urban Districts.	Rural Districts.	ADMINISTRA-	England and Wales.
Birth-rate	34.6	38.3	36.3	30,3
Death-rate	19.1	19.4	19.2	18.7
Zymotic death-rate	3.06	2.21	2.69	2.14
Infant Mortality-rate	185	171	179	161
Small-pox	Nil.	Nil.	Nil.	0.007
Scarlet Fever	0.20	0.24	0.22	0.14
Diphtheria and Membranous Croup	0.23	0.12	0.18	0.25
"Fever" (Enteric, Continued, and Typhus)	0.39	0.39	0.39	0.17
Measles	0.23	0.21	0.22	0.36
Whooping Cough	0.57	0.30	0.45	0.29
Diarrhœa	1.42	0.93	1.20	0.88

I would here point out that the diseases whose deaths are included in the zymotic death-rate are according to the Registrar General's classification, which is adopted by the Local Government Board, small-pox, scarlet fever, diphtheria, (and membranous croup), "fever" (including typhus, typhoid, and continued fevers), measles, whooping cough, and diarrhœa. In several of the annual health reports this classification has not been adopted in calculating the zymotic death-rate, the most common departure from it being the exclusion of deaths from diarrhœa, and the inclusion of deaths from puerperal fever and erysipelas.

It is most desirable that in all the health reports the zymotic death-rate should be given as the death-rate from the seven chief zymotic diseases mentioned above, otherwise the rates in the different districts of the county are neither comparable with one another nor with those given in the Registrar General's returns.

Small-pox.

The administrative county during the past year has been remarkably free from this disease, considering that it has been prevalent in many parts of the country. Only 9 cases were reported and 3 of these were in the district of the River Tyne Port.

Of the other cases 3 occurred in Jarrow, having been imported by a sailor from an infected ship, 1 in West Hartlepool imported from London, 1 in Spennymoor, and 1 at Wingate in the Easington rural district. Strict precautionary measures were adopted in each district to prevent the disease from spreading, and with very satisfactory results. In the borough of South Shields there was a sharp outbreak in April (18 cases), but there also the spread of the disease was controlled.

Although of recent years small-pox has been frequently introduced into this county, it has in no district attained epidemic proportions, a fortunate circumstance which has probably resulted from the great majority of the population of the county having availed themselves of the protection, against an attack of the disease, by vaccination.

During the past year there was not a single death from small-pox in the administrative county.

Scarlet Fever.

This disease was even more prevalent than in 1894, the number of cases and deaths being 5,070 and 175 respectively, as compared with 4185 and 136 in the previous year. The case mortality was slightly higher also (3.4 per cent.), and the death-rate per 1,000 population was 0.22, which is very much higher than the rate for England and Wales.

In the Stockton, Brandon, Chester-le-Street, Easington, and Lanchester districts the disease was epidemic during the greater part of the year. The continued prevalence of scarlet fever in the county is as I stated last year, the result of want of isolation of the infected children. In the mining districts of the county the disease is of so common occurrence that it is looked upon with very little dread, and there is the greatest difficulty in inducing the parents to allow the patients to be removed to an isolation hospital, or even to keep them isolated from the other members of the family. The patients are allowed to play about the house and even in the street with other children before they are free from infection, while not infrequently, as is instanced in the report of the medical officer of health for Jarrow, the children are sent back to school while in the "peeling" or most infectious stage of the disease. What also renders the control of the disease difficult is the occurrence of many cases of scarlet fever

which are of so mild a type that no medical attendance is sought, even if their nature is recognised by the parents.

I have no doubt that the repugnance of the parents to the removal of scarlet fever patients to hospital would soon be overcome if properly equipped and comfortable hospitals were provided by the local authority; and if the first cases in a district were so isolated and the infected house properly disinfected by a competent officer of the authority the spread of the disease could be kept under control.

In several districts in the county, school closure was resorted to as a means of preventing the spread of the disease, and in some districts such action was attended with satisfactory results; on the other hand, the medical officer of the Easington rural district is of opinion that the closing of the elementary schools has little, if any, effect in controlling the prevalence of scarlet fever.

Diphtheria and Membranous Croup.

There was a further and considerable decline in the mortality from these diseases, and the death-rate for the county (0·18) was considerably below that for England and Wales (0·25), while for the rural districts of the county the rate was only 0·12 per 1,000 population. The number of cases and deaths reported were 645 and 143 respectively, the case mortality being a little more than 22 per cent., which is slightly lower than in 1894. In no district was the disease markedly prevalent, but in the early part of the year the incidence

was somewhat marked in Spennymoor, and in November a sudden outbreak of a mild type occurred at Stargate, in the Ryton urban district, to cope with which it was considered desirable to close the schools. In some districts antitoxin is stated to have been used with considerable success in the treatment of diphtheria cases. In many of the reports no light is thrown on the etiology of the cases of diphtheria, but where the cause has been systematically enquired into there is evidence that dampness and insanitary conditions generally are usually associated with the cases. Dr. Ellis, of the Auckland rural district, attributes some of the diphtheria cases in his district to the drinking of impure water.

Typhus Fever.

Cases of this disease were reported from Stockton (1), West Hartlepool (1), Tow Law (1), and Easington rural district (3), and there were 3 deaths.

Enteric or Typhoid Fever.

Enteric fever, both as regards prevalence and mortality, has for many years been very marked in the County of Durham, and unfortunately the same remark applies to 1895. During the past year there were 1,982 cases and 286 deaths, equal to a case mortality of 14.4 per cent., as compared with 1,420 cases and 259 deaths, or a case mortality of 18.2 per cent. The death-rate per 1,000 population for the county (0.37) was more than twice as high as that for England and Wales (0.17), and also higher than for any other county district in the country.

The following table gives the number of cases of enteric fever, the deaths, the case mortality and death-rate during each of the months of 1895 in this county:—

Enteric Fever in Administrative County.

1895.		No. of Cases.	No. of Deaths	Case Mortality PER CENT.	DEATH-RATE PER 1,000 POPULATION PER ANNUM.
January		108	24	$22 \cdot 2$	0.36
February		83	15	18.0	0.25
March		59	10	16.9	0.15
April		65	24	36.9	0.38
May	• •	42	8	19.0	0.12
June	• •	55	7	12.7	0.11
July		82	14	17.0	0.21
August		129	14	10.8	0.21
September	. ,	404	38	9.4	0.60
October	, ,	571	61	10.6	0.93
November		256	49	19.1	0.77
December		12 8	22	17.1	0•33
1895	• •	1982	286*	14.4	0.37

^{*} This number does not agree with the total obtained by adding together the deaths from enteric fever (288) given in Tables AI and BI. The above number is obtained from the monthly returns supplied to the county medical officer by the registrars, while Tables AI and BI are compiled from the reports of the district medical officers of health.

It will be noticed that prior to August enteric fever was not unduly prevalent, but towards the end of that month the cases began to increase in number, and during the next two months nearly 1,000 cases were reported, the disease, as in 1894, reaching its maximum prevalence in October. In previous years the typhoid death-rate has been much higher in the rural than in the urban districts of the county, but last year the rate in the urban and rural districts was exactly the same, though for the six boroughs the typhoid death-rate was fairly satisfactory, and very little higher than that for England and Wales. highest death-rates from typhoid fever were 2'3 per 1,000 population in Consett, 1.5 in Leadgate, and 1'0 in Hetton among the urban districts, while in the rural districts the highest rates were in the Medomsley division of the Lanchester rural district (1.4), Sunderland (0.8). In the summary attached to this. report I have quoted rather fully the remarks of the medical officers of health who have referred to the causes operating in their districts to produce typhoid fever, and it is therefore unnecessary for me to refer to them here except very briefly. In Blaydon suspicion is thrown on the water supply to part of the district as being the cause of the disease, but in Darlington, Bishop Auckland, and Chester-le-Street, where the sources of the water supplies are polluted by sewage, there was no marked incidence of enteric fever, and in the Houghton urban and part of the rural district, where the disease was rather prevalent, there was no evidence

that the water supply, which is liable to intermittent pollution, was responsible for it. In Leadgate a serious epidemic was probably the result of local contamination of the public water supply, and possibly the very severe epidemic at Consett may have been similarly caused. The cause of the prevalence of enteric fever in Stockton, Leadgate, Shildon, Crook in the Auckland rural district, and in several other districts is attributed partly or entirely to emanations from defective sewers and untrapped house drains. In Hetton-le-Hole a serious outbreak occurred, and was attributed to the emanations from the untrapped openings of the surface water drains, which many of the inhabitants used as sewers, although a proper system of house drainage and sewerage had been provided. But in nearly every district where typhoid fever was prevalent the medical officer of health is of opinion that the insanitary conditions inseparable from the large, deep, pervious, and often uncovered middenprivies which are so numerous in most of the mining and other populous districts of the county, were the chief cause of the disease. In the report for the Stockton urban district the nuisances inseparable from this system of excrement disposal are graphically described, and without doubt so long as such abominations are allowed to exist in close proximity to dwelling-houses enteric fever will, under favourable conditions, continue to be prevalent. The open channels, which in many villages are the only means of drainage, are also a great danger, for the surrounding soil becomes saturated with foul matter, and should the slops from a typhoid infected house be discharged into them, there is a probability of the infection being conveyed to other houses past which the channel runs. In the West Hartlepool report it is pointed out that the majority of the typhoid cases occurred in houses built on "made" ground.

In several of the reports attention is drawn to the fact that the symptoms of many of the cases of enteric fever are very abnormal, and also that the disease is often much more infectious than is generally supposed. Dr. Renton of Consett, Dr. Park of Houghton, and Dr. Squance of Sunderland specially refer to this peculiarity. In many of the cases there is an absence of diarrhæa—constipation being often a marked symptom—while severe pains in the head and limbs, and intense prostration, together with abdominal tenderness, are often present, and, as Dr. Squance points out, in many of their clinical aspects the cases resemble typhus fever.

Another very interesting feature in connection with enteric fever prevalence in this county is that in many districts the proportion of males attacked is very much greater than females. In the reports for the Houghton urban and the Sunderland rural districts reference is made to the fact that the majority of the typhoid cases occurred among the male population, most of whom are coal miners, and in a special report on the epidemic at Leadgate I noticed a similar fact. An analysis of the deaths from typhoid fever in the

administrative county during 1895 shows that 173 of the 286 deaths, or 60.5 per cent. were those of males, and the question arises as to whether in the sanitary surrounding of those employed in the coal mines there are not at times conditions (probably arising from the want of any system of excrement disposal) which are favourable to the spread of the infection of typhoid fever. It is my intention to make further enquiry into this point.

Continued Fever.

There were only 12 deaths returned from this disease, and 4 of these were in the Easington and 3 in the Sunderland rural districts. The seasonal prevalence of the disease was almost the same as that of enteric fever, and nearly all the deaths occurred in districts where, and at the time that, enteric fever was prevalent, and it is probable that the cases of continued fever were mostly cases of that disease.

Puerperal Fever.

There were 85 cases notified and 42 deaths, as compared with 90 cases and 41 deaths in 1894. The majority of the deaths occurred in the first half of the year, and all but 11 of them were in the rural districts of the county. As I pointed out last, year the mortality from this disease was probably greater than the above figures indicate, for many deaths from septic absorption after parturition are not certified as having been due to puerperal fever.

Measles.

There was a very marked decline in the

number of deaths from this disease, only 174 deaths being registered as compared with 512 in 1894. The behaviour of this disease during the past year bears out the remarks in my last annual report that measles tends to become epidemic in most districts about every second year, and as the following table shows, those remarks have of late years been applicable to the administrative county.

	Administrative County.							
	1891.	1892.	1893.	1894	1895.			
Deaths from Measles	199	591	284	512	174			
Death-rate from Measles per 1,000 population	0.27	0.80	0.38	0.67	0.22			

During the early part of the year measles was very seriously epidemic in Jarrow, and, to a less extent, in the adjoining district of Hebburn, and towards the end of the year it became seriously prevalent in Shildon and in several of the villages in the adjoining rural district of Auckland. In Jarrow, in the rural district of Auckland, and in several other districts where the disease assumed epidemic proportions, school closure was resorted to as a means of checking its spread.

The death-rate from measles in the administrative county for last year was only 0'22 per 1,000 as compared with 0'67 in 1894, and was very much lower than the rate for England and Wales.

Whooping Cough.

There were 349 deaths, or 98 more than in 1894, and the death-rate was 0.45 per 1,000 population, which was considerably in excess of the rate for the country generally (0.29). The disease was very much more fatal in the urban than in the rural districts, the mortality being especially high in Spennymoor and in the boroughs of Hartlepool, Stockton, Jarrow, and West Hartlepool. Whooping cough, though very infectious, is not a notifiable disease, and in none of the sanitary districts of the county does any attempt appear to have been made by the local authorities to control its spread, though I would point out that during last year in the county of Durham it caused more deaths than any other infectious disease.

Diarrhœa.

The past year must be classed as a "diarrhœal" year, as the mortality from diarrhœa was extremely high, there being 920 deaths, or 655 more than in the previous year. The death-rate for the administrative county was 1'20, while that for England and Wales was 0'88, which itself is more than double that of the previous year. The mortality was considerably higher in the urban than in the rural districts, the highest death-rates being in Stockton (2'42), Hebburn (2'35), Southwick (2'21), West Hartlepool (2'17), Seaham Harbour (2'16), Blaydon (2'0), Whickham (1'64), and the rural district of

Sunderland (2·17), South Shields (1·69), and Easington (1·25). More than three-fourths of the deaths occurred in the months of August, September, and October, and during September there were more deaths than in the whole of 1894. While no doubt the exciting cause of the epidemic of summer diarrhæa was the extremely hot weather of the latter part of August and September, it is also equally certain that the predisposing cause was the existence of insanitary conditions, such as a polluted sub-soil, the existence of filth accumulations, and over-crowding, while improper feeding and maternal neglect were also contributing causes.

In several reports diarrhœa is excluded from the deaths on which the zymotic death-rate is calculated, and Dr. Stobo, of Southwick, argues that diarrhœa should be excluded from the list of zymotic diseases, as it is often only a symptom of some non-zymotic disease, such as tuberculosis. On the other hand, Dr. Taylor, of Chester-le-Street, says:-"I consider that "all deaths from gastro-enteritis, enteric catarrh, and "enteritis, if occurring during the hot months of "August, September, and earlier October, and the "victims being infants, should be classed under "diarrhœa, for while improper feeding will produce "disturbances of the gastro-intestinal tract, it has been "proved beyond doubt that infantile diarrhœa is "chiefly produced by a zymotic agency whose habitat "is the soil. That cause increases as the temperature "of the soil (taken 4 feet below the surface) reaches

"and rises above a mean of 56 F. While the cause "of summer diarrhœa is a microbe, the virulency of "the disease is increased by an over-crowded condition " of dwellings, by a sewage polluted soil, and especially "by an over-crowded state of separate houses, or "again while the dwelling may not be overcrowded, "diarrhœa is especially fatal to children living in one "room tenements, and this holds good in clean houses "with careful mothers." Dr. Taylor's view as to the inclusion of diarrhœa among the chief zymotic diseases is the one generally accepted by sanitarians, and I am strongly of opinion that the mortality from diarrhœa is a very true index of the sanitary condition of a district. Dr. Squance, of Sunderland, shows that in his district the outbreaks of typhoid fever have generally occurred in the month following the outbreak of diarrhœa, "which certainly appears as though there "was an intimate relationship between the two." And he goes on to say :- "If diarrhœa is due to emanations, "induced by climatic conditions, from polluted soil, "may not the stools from patients thrown into privy-"middens yield a ferment, which affecting adversely "food exposed to its contaminating influence, exerts an "influence upon bacilli found in the human organism "that, under ordinary circumstances, are innocuous, "causing them to manifest a malignant action, the "results of which are indistinguishable from those "produced by the bacilli of typhoid fever? or are "typhoid germs, which may be latent in polluted soil, "roused into fresh activity by the influence of those of

"diarrhœa, and being disturbed are distributed by "ærial convection?

The frequent occurrence of high mortality rates from enteric fever and diarrhœa—two diseases very largely preventible—is certain evidence that there exist in the administrative county of Durham many insanitary conditions which are capable of being remedied, and of these conditions the worst in my opinion is the old offensive midden-privy system of excrement disposal which is so generally in operation.

Infectious Diseases Notification Act.

During 1895 this Act has been adopted in the Auckland and Barnard Castle rural districts. The Bishop Auckland Urban Council also adopted the Act with regard to some of the diseases mentioned therein, but the Local Government Board having pointed out to them that the Act must be adopted in its entirety, the District Council decided not to adopt it at all. The Act has now been adopted in every district in the county except in the four mentioned below, which have an estimated population of 34,980.

Urban.

RURAL.

Weardale.

Bishop Auckland. Southwick.

Stanhope.

The Local Government Board have recently written to the Councils of the above-named districts advocating the adoption of the Act, but I know that in some of them the advice of the Board has not been followed, and the time has now arrived

when the Act should be made compulsory throughout the country, as it has been in London for some years. The benefits resulting from notification have been so fully proved that there is no ground for delay in making the Act compulsory instead of adoptive.

The cost of notification during 1895 was £1 10s. 5d. per 1,000 population of the districts in which the Act was in operation, as compared with £1 7s. 9d. in 1894 and £1 11s. 4d. in 1893.

The following table shows the number of cases of infectious disease reported during each month of the year in the administrative county:—

TOTALS.	6	5070	394	151	9	1973	16	195	7.1	~	968	8782
DEC.	:	548	40	10	:	128	:	12	73	•	94	834
Nov.	•	655	22	10	67	256	H	22	∞	•	88	1109
Oct.	•	629	41	12	•	571	ಣ	35	ಣ್ತ	•	67	1408
SEPT.	•	899	26	14	Н	404	•	24	70	•	78	1220
Aug.		443	23	10	•	130	•	12	ಣ	•	79	684
JULY.	•	388	56	4	•	72	, -	12	ನಾ	о. Н	99	573
JUNE.	•	279	17	1-	•	55	•	14	4	ø nd	22	433
May.		205	19	11	•	42	•	6	က	•	64	354
APRIL.	,	215	53	20	က	65	•	∞	∞	•	7.9	452
Максн.	9	353	34	21	•	59	•	14	10	•	81	578
FEB.	•	288	23	17	•	88	•	14	∞	•	71	504
Jan.	•	349	35	15	•	108	₩	22	14	•	88	633
	Small-pox	Scarlet Fever	Diphtheria	Membranous Croup	Typhus Fever	Enteric or Typhoid Fever	Relapsing Fever	Continued Fever	Puerperal Fever	Cholera	Erysipelas	Totals

Isolation Hospital Accommodation.

In several of my quarterly reports I have referred fully to this question, and during the past year I made enquiry into the accommodation in all the districts in the county. In no less than 14 districts, having a total population of 206,509, there is no means of isolation of any kind, while in a number of other districts it is insufficient or unsatisfactory. In September of last year a conference between a committee of the County Council and representatives of the District Councils throughout the county was held on the subject of isolation hospitals at Durham. The meeting was well attended, and after discussion the following resolution was adopted :-- "That in the opinion of this "conference it is desirable that each local authority "should provide isolation hospital accommodation for "its own district, or that two or more authorities should "combine together for that purpose."

I have since made enquiry and reported to your committee under sect. 6 of the Isolation Hospital Act, and you have appointed a sub-committee to hold enquiries under that Act into the desirability of causing hospitals to be established in certain districts which are unprovided with suitable isolation hospital accommodation.

In certain districts during the past year active steps have been taken by the District Councils in this matter. At Seaham Harbour an additional ward has been constructed and other improvements effected, but it is to be regretted that very little use was made of the hospital during the year, only one case having been removed to it. The Lanchester Joint Hospital Board have erected an excellent hospital of 12 beds at Langley Park, and intend to erect another ward on the site as soon as necessary. The Board have also decided to improve their hospital at Leadgate. The Sunderland Rural District Council have at last obtained the sanction of the Local Government Board to purchase the site on which they desire to erect a permanent hospital. The Houghton Urban Council have been active in endeavouring to obtain a site for a hospital, but have had to contend with considerable difficulties. Arrangements have been made by the Auckland Rural and the Shildon and Willington Urban District Councils for the erection of two hospitals in the rural district for the joint use of these districts. The Stockton Rural Council have arranged with the Stockton Corporation for the use of the borough hospital, which is situated in the rural district, and this arrangement should work satisfactorily. In several other districts the isolation hospital question has received some consideration, but in most instances without any practical result up to the present time.

The cases isolated in hospital in the administrative county numbered 855, or 12.0 per cent. of the cases notified, both of these figures being considerably in excess of the previous year.

Water Supply.

All the urban districts of the county are fairly

well supplied with water as regards quantity, but in several of them the quality is open to suspicion, if not dangerous. Darlington and Bishop Auckland obtain their supply from rivers which receive sewage at different points above the intakes. At Blaydon the supply to the eastern portion of the district appears to be of doubtful purity, and the medical officer of health has a suspicion that it may have been the cause of the cases of enteric fever there; while in the Houghton-le-Spring urban district the supply is stated to be liable to intermittent pollution. The water supplied by the Stockton and Middlesborough, and the Consett water companies, though obtained from a pure source, is sometimes discoloured, but steps are being taken by both companies to properly filter the water.

In several of the rural districts considerable improvement has either been effected in the water supplies or schemes are in progress for that purpose. In the Auckland rural district a loan has been sanctioned by the Local Government Board for supplying Toft Hill and Lands Bank with water, and plans have been prepared for similarly supplying the townships of Lynesack and Softley. In the Chesterle-Street district schemes are in progress by which a population of 3,300 will shortly be supplied with pure water. In the Easington district the village of Easington has been supplied with a good supply, and arrangements are being made for supplying a considerable population at Wingate and Castle Eden. In the Lanchester district pure water has been laid on to

nearly every part of the district, and the same remark applies to the Weardale district, while in nearly every other rural district local improvements in the water supply have been carried out.

In most of the districts the quality of the water is good, but there are some serious local exceptions. The village of Chester-le-Street is partly supplied from a stream, the water of which, above the intake, is much polluted. The supply to the northern portion of the Houghton rural district appears liable to intermittent pollution, as does that to the Tunstall and Silksworth portions of the Sunderland rural district. In the following places the supply is either insufficient or of bad quality: - Firtree village and Low Lands in the Auckland rural district; Fatfield and Low Flatts in the Chester-le-Street rural district; Wheatley Hill and Wingate Lane in the Easington rural district. Wheatley Hill colliery in the Easington district, and Ludworth colliery in the Durham rural district, there is great need of a better distribution of the supply.

Housing of the Working Classes.

In several of the rural districts the local authority has put in force its powers under the Housing of the Working Classes Act, sometimes acting on its own initiative, but more frequently at the request of the County Council, and a large number of houses have either had their sanitary condition much improved as a result of such action, or else have been closed. In a few instances the County Council have themselves taken action on default of the District

Council, and have applied for closing orders at the expense of the latter. In addition the sanitary condition and surroundings of many other houses have been indirectly improved by works of drainage, paving of back streets, and better arrangements for excrement disposal and removal.

In several districts the new houses that are built are not altogether satisfactory, owing either to the want of building bye-laws, or to their not being properly enforced.

In Stockton and Seaham Harbour there are no building bye-laws of any kind, and consequently the local authorities are without proper control over the erection of houses in their districts. In other districts houses are allowed to be erected on "made" ground, and houses are constantly being built in the county whose sites are not rendered impervious, with the result that ground air and moisture find their way into the dwellings. In many districts much of the dampness of the houses, which is one of the worst defects, is caused by the absence or defective condition of the spouting, though in this respect considerable improvement has been effected in several districts during the last few years.

Excrement Disposal and Removal.

It is gratifying to notice that in some districts the local authorities are recognising that the middenprivy system of excrement disposal is at its best objectionable and offensive, and are taking steps to gradually abolish it. In the boroughs of Hartlepool,

Darlington, Durham, and Jarrow the reports state that water-closets or small ash-closets are being substituted for the old ashpit-privies, and, especially in the Stockton and South Shields rural districts, similar improvements have been effected in the system of excrement disposal. On the other hand, in several districts the erection of the ashpit-privy (often of faulty construction) is still permitted, and they are frequently of such a size and in such a position that they are bound to cause a nuisance and be a danger to health. In some parts of the rural districts there is perhaps an excuse for the erection of small and well constructed privy-ashpits, owing to the difficulty experienced in obtaining that frequent and systematic scavenging which is essential where the conveniences are the small ashclosets, but in the urban districts not only should the erection of the ashpit-privy in connection with new buildings be prohibited, but the District Councils should commence to deal with all middens in their districts which are a nuisance (and numbers are to be found in every district) and insist on their being substituted by either water-closets, or by the dry ashcloset, which is so largely used in South Shields, Jarrow, and other towns. In most of the health reports reference is made to the evils resulting from the midden-privies, to which outbreaks of typhoid fever and diarrhæa are frequently, and with undoubted truth, attributed.

The Darlington medical officer of health refers to the old middens as "abominations." In the Stockton urban report the nuisances resulting from them are graphically described, and in Jarrow, Consett, Leadgate, and the Auckland, Houghton, Lanchester, Sunderland rural, and other districts outbreaks of disease are attributed wholly or in part to them. Without doubt the continued high mortality from typhoid fever and summer diarrhæa in the county of Durham, which has procured for it an unenviable notoriety is very largely due to the midden-privy system of excrement disposal which is so generally condemned by the sanitary advisers of the local authorities. In many parts of the county, notably in the Hetton urban and the Easington rural districts, privy accommodation has been provided for houses that were without any conveniences.

Closely connected with excrement disposal is scavenging and removal of house refuse. This can only be done satisfactorily and systematically when undertaken by the local authorities, for wherever it is left to the owners or occupiers it is invariably badly performed, especially during the summer when the farmers are busily occupied. In some districts the local authorities have apparently not recognised that proper scavenging means the prevention and not the removal of filth accumulations, and think that so long as the ashpits are emptied when they are full and before they overflow, the work of refuse removal is satisfactory, and in some districts the substitution of the small ashclosets for the midden-privies is objected to on the grounds that they get full so soon and require to be so frequently emptied.

The very essence of proper scavenging is the frequent removal of all filth from the proximity of the dwellings, and the sooner this is recognized by all sanitary authorities the better. In many of the urban districts the local authority holds itself responsible for the scavenging and refuse removal, but there are several exceptions in spite of the frequent recommendations of the medical officer of health. In several of the rural districts the work is undertaken or contracted for by the local authority. As a result of orders made by the Local Government Board, under sec. 42 of the Public Health Act, 1875, the scavenging is undertaken by the District Councils in the populous townships of the Auckland and Durham districts. In the Houghton, South Shields, Stockton, Sunderland, and part of the Chester-le-Street rural districts the work has been similarly undertaken with beneficial results, and the Easington Rural District Council are trying the experiment of undertaking the scavenging in a portion of their district where the work was formerly performed by the occupiers.

In the populous Lanchester and Sedgefield rural districts I am not aware that the local authorities have undertaken the scavenging in any township, though it is very desirable that they should do so, as from my own experience I know that nuisances from want of systematic scavenging are not infrequent in these districts. In some districts difficulty has been experienced in obtaining proper "refuse tips," and nuisances have been caused by the tipping of night

soil and house refuse in unsuitable places near to houses and roadways. In Hartlepool the erection of a destructor is recommended.

House Drainage, Sewerage, and Sewage Disposal.

The proper trapping and construction of house drains is a matter of great importance, as if either are defective nuisances of a dangerous character from sewer emanations close to the houses are bound to occur, and it is satisfactory to note that in many districts active steps are being taken to prevent the occurrence of such nuisances. The old "bell" and other metal traps are fast disappearing from most districts, but in some places the earthenware gully traps that have replaced them, or have been laid down in connection with improved drainage systems, are not satisfactory, in that they are not self-cleansing and are often far too large, so that they are apt to become miniature cesspools and cause nuisances. In the Consett and Leadgate districts this is frequently the case, and the district surveyors should insist that all house drain traps should be of small size and selfcleansing.

As regards sewerage, considerable extensions have been made in several of the rural districts, and in the Auckland, Easington, Chester-le-Street, and Sunderland rural districts especially, schemes of sewerage (and sewage disposal) are being undertaken or are under consideration. In West Hartlepool the existing sewers appear to be insufficient for the requirements of the town, and in Stockton, Shildon, Consett,

Leadgate, Hetton, Houghton, and at Crook, in the Auckland rural district, outbreaks of enteric fever are attributed in some measure to emanations from drains or sewers. The sewers in Stockton and the house drains at Crook appear to be in a very defective state.

In a large number of districts works for the disposal of the sewage have been undertaken, most of them owing to pressure having been brought to bear by the County Council on account of the pollution of watercourses by sewage. At Barnard Castle, and for part of the Blaydon district, sewage disposal works are nearly completed. Schemes have been adopted for Durham and Bishop Auckland, subject to the approval of the Local Government Board, who have held enquiries as to their suitability. At Benfieldside, works have been completed. At Stanley, a scheme which had been adopted has had to be abandoned, owing to subsidences taking place in the land, and at Spennymoor and Willington the matter has been under consideration. In the Durham, Auckland, Chester-le-Street, Lanchester and Barnard Castle rural districts, schemes for the disposal of the sewage of several villages have been adopted, and at Croxdale and Coundon the existing works have been enlarged and improved.

Work of Inspectors of Nuisances.

The returns of work done by the inspectors of nuisances are tabulated at the end of the summary, and they show that in many districts there has been considerable activity in removing nuisances and defective

conditions. In several of the urban districts the majority of the notices were not served by order of the local authority, and were therefore informal, and could not be enforced. The majority appear nevertheless to have been complied with, but it is desirable in all nuisances arising from structural defects that the statutory notices should be served.

As a rule, the returns from the inspectors indicate that a record of their yearly work is systematically kept, but in a few instances neither the record of the work accomplished nor the manner in which the return is prepared can be regarded as satisfactory. I am glad to report that returns were received, for the first time, from the inspectors of nuisances of every sanitary district.

Additional inspectors have been appointed for Spennymoor and for the rural districts of Auckland, Lanchester, and Sunderland, but in several districts it is impossible with the present staff to attend to all the sanitary requirements, this being especially the case in the Easington and Sedgefield rural districts.

Cowsheds, Dairies, and Milkshops.

In many of the reports it is stated that improvements have been effected in the sanitary condition of these places, and they certainly appear to receive more systematic supervision than was formerly the case. In Brandon the cowsheds were systematically inspected by the medical officer of health, and it is certainly desirable that every cowshed and dairy should be visited at 'least once a year by that officer. In

Stockton and Leadgate regulations have been framed for their proper management, and are awaiting the sanction of the Local Government Board. In no district was an outbreak of disease definitely traced to the use of contaminated milk, but in Stockton, Leadgate, and in the Sunderland rural district, infected milk may have played a part in the diffusion of enteric fever, and in the Stockton rural district an outbreak of diarrhœa is attributed to the consumption of milk from cows "having been put on to very flush fogs."

It is very desirable that every District Council should adopt regulations with regard to dairies, milk-shops, and cowsheds, especially as to the lighting and cleansing of the cowsheds and the minimum amount of cubic space to be allowed per cow. A register should also be kept of all the cowsheds, milkshops, and dairies in each district.

Dr. Squance, of the Sunderland rural district, referring to the many channels by which milk may be polluted, advocates that the cows should not be milked in the byres, which are frequently dirty and ill ventilated, but in sheds properly constructed for the purpose.

Slaughter-houses.

Many of the reports state that these have been inspected and found to be in good condition. A new public slaughter-house of excellent construction has been erected at West Hartlepool, and a committee has been appointed at Jarrow to enquire into the question of erecting one for that town. The medical officers of

health for Darlington and Stockton advocate the erection of a public slaughter-house, and the latter refers to the many defects inseparable from the present system of private slaughter-houses.

In only a few districts were any seizures of unsound food made during the year, and in the majority of the sanitary districts there appears to be no supervision of the food supplies.

Factories and Workshops.

Although the sanitary supervision of these places devolves to some extent upon the District Councils, in only two or three reports is any reference made to them.

In Stockton, 15 of the 300 workshops in the town were inspected by the sanitary staff. The Factory and Workshops Act, 1895, which came into operation on January 1st, 1896, contains very important provisions and increases the power of control of local authorities over factories and workshops. The Act now includes laundries in its scope.

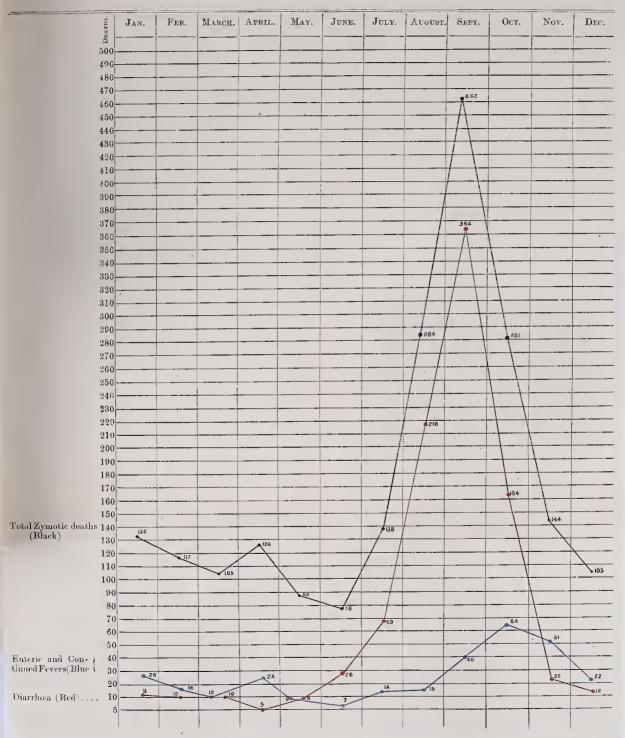
Bye-laws.

Several districts—Stockton, West Hartlepool, Seaham Harbour, and the rural districts of Sedgefield, Teesdale, and Weardale—have no proper building or sanitary bye-laws, and consequently the local authorities have no control over the erection of new buildings, and have not that power which is desirable for the prevention and removal of nuisances. The evils resulting from the want of sanitary bye-laws is specially referred to by Dr. Horne, of Stockton. In other districts the

bye-laws are out of date and practically of no use for enforcing the requirements of present day sanitation, but in some instances the local authorities have recognised these facts, and are engaged in framing new bye-laws or in re-modelling those which are at present in force.

Appended to this report are coloured charts showing the monthly mortality in the administrative county from the chief zymotic diseases, and at the end of the summary are tables relating to the vital statistics and other matters of interest in the various sanitary districts.

CHART SHOWING NUMBER OF DEATHS DURING EACH MONTH OF 1895, FROM TOTAL ZYMOTIC DISEASES AND FROM ENTERIC AND CONTINUED FEVERS AND DIARRHŒA, IN THE ADMINISTRATIVE COUNTY OF DURHAM.



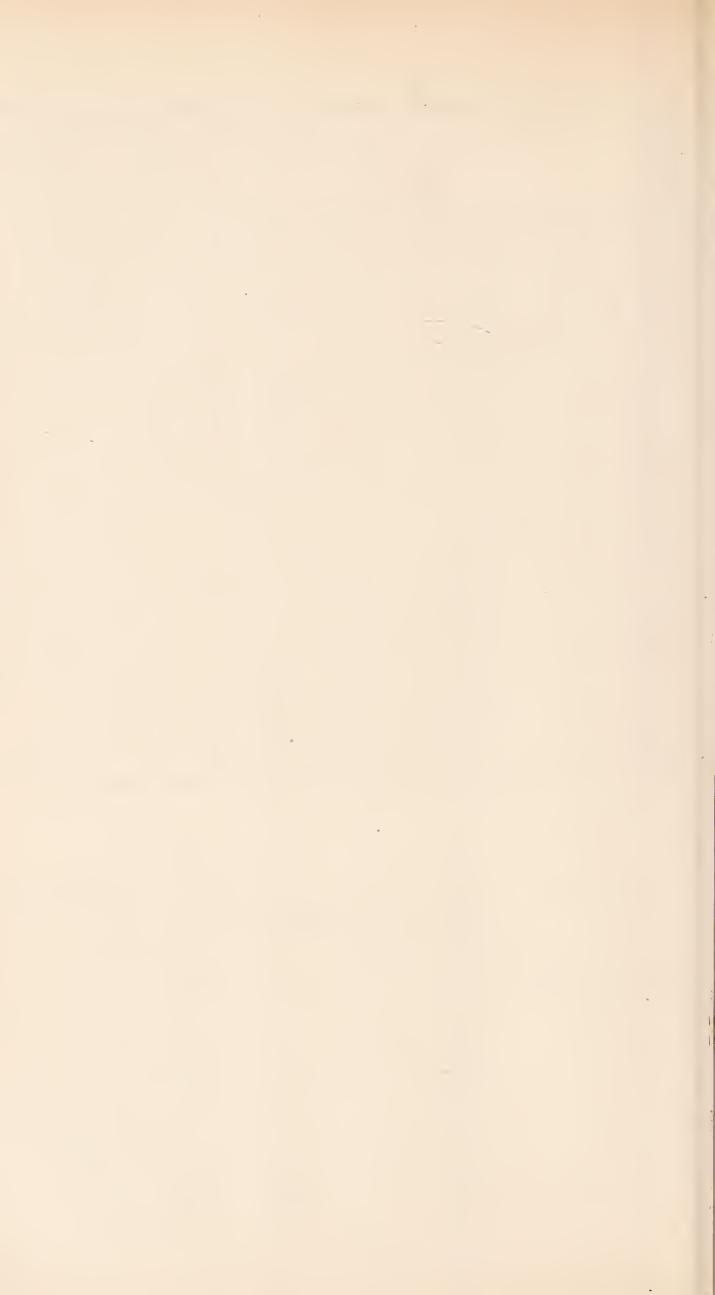
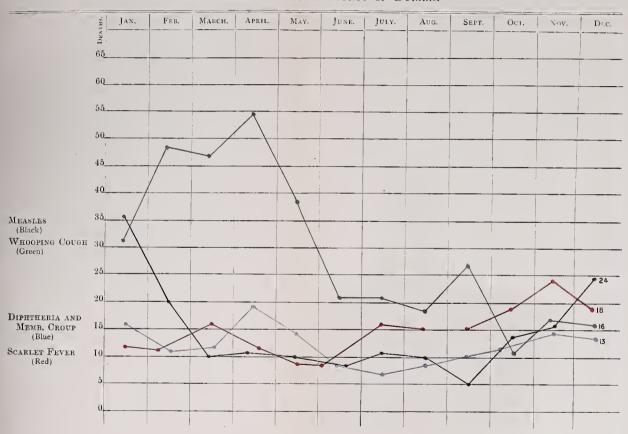


CHART SHOWING THE NUMBER OF DEATHS DURING EACH MONTH OF 1895 FROM SCARLET FEVER, DIPHTHERIA, MEASLES, AND WHOOPING COUGH, IN THE ADMINISTRATIVE COUNTY OF DURHAM





xliii.

Table shewing the number of Births, Deaths, and Deaths from the Chief ZYMOTIC DISEASES IN THE ADMINISTRATIVE COUNTY OF DURHAM, DURING EACH OF THE MONTHS OF 1895.

		Births.		Deaths.	Deaths under 1 year	Total Zymotic Deaths.	Small-pox.	Scarlet Fever.	Diphtheria and Mem- branous Croup.	Fevers, (Enteric, Continued, & Typhus).	Measles.	Whooping Cough.	Diarrhœa.
IANUARY	•	2409		1184	348	132		12	91	26	36	Ić	Basel 1—1
FEBRUARY				1108	296	711	•	II	11	17	, 02	48	
MARCH	:	2337		1440	389	105	•	91	12	OI	OI	47	OI
APRIL	:	2412		1355	393	126	•	12	61	25	II	54	Ŋ
MAY	•		···········	1023	322	88		~	14	6	01	38	6
JUNE	•	2284	, 4	923	267	78	:	∞	~	7	∞	21	56
JULY	•	2470	· · · · · · · · · · · · · · · · · · ·	1078	373	138	•	91	7	14	11	21	69
AUGUST	•	2325		1370	577	284	•	15	8	15	10	18	218
SEPTEMBER	•	2252		1657	795	462	•	15	10	41	7	27	364
OCTOBER	,	2369	-	1409	571	281		18	H	64	13	H	164
NOVEMBER	•	. 2216		1080	327	144		23	14	52	91	17	22
DECEMBER	•	1961		1103	318	105	* *	18	im CO	22	24	91	12
			-										

SUMMARY OF THE SANITARY WORK OF THE COUNTY COUNCIL, 1889–95.

The first step the County Council took towards the exercise of its sanitary powers was the appointment of committees towards the end of 1889 to enquire into the pollution of the rivers Wear and Tees. action of these committees resulted in the rivers being inspected by some of the county police, who drew up a report on the pollutions which they had ascertained to exist, and subsequently notices were served under the Rivers Pollution Act, 1876, by the Council on the various local authorities and individuals who were responsible for the pollutions. Owing, however, to the fact that at that time the chief provisions of the Rivers Pollution Act could not be enforced with regard to certain cases of pollution, and to the want of a county sanitary staff, the notices were not enforced on their expiration.

In April, 1890, the County Council appointed a Medical Officers' Report Committee to deal with the annual and other reports of the district medical officers of health which are required to be forwarded to the Council. This committee arranged with Dr. Henry E. Armstrong, the medical officer of health of Newcastle-on-Tyne, to summarize the annual reports of the district medical officers of health for 1889, especially with reference to matters requiring to be dealt with by the County Council under sec. 19 (2) of the Local Government Act, 1888. A copy of Dr. Armstrong's

report was sent to each sanitary authority in the administrative county, and subsequently the committee made a recommendation to the County Council, which was adopted, that a representation be made to the Local Government Board, under sec. 19 (2) of the Local Government Act, 1888, respecting (1) the want of paving of the back streets of Darlington and the nuisances resulting from the insanitary middens in that town, (2) the insufficient accommodation for the isolation of infectious diseases, and the want of suitable public slaughter-houses at West Hartlepool, and (3) the practice of permitting the interment of dead bodies in the Brandon urban and part of the Chester-le-Street rural districts without either inquest or coroner's or doctor's certificate. The action of the Council on the last-mentioned subject led to no practical result, but the Darlington back streets have since been properly paved, and many of the insanitary middens abolished; and public slaughter-houses have been erected by the Corporation of West Hartlepool.

Dr. Armstrong was again engaged to summarize the annual reports of the medical officers of health for 1890, and a copy of his report, which was much more complete and comprehensive than that of the previous year, was again forwarded to every sanitary authority in the county for their consideration, from several of which letters were received promising to carry out the recommendations respecting their districts contained in the report. No representation was made to the Local Government Board on matters

referred to in the district medical officers' reports for 1890.

In March, 1892, the Medical Officers' Reports Committee made a recommendation to the County Council to appoint a medical officer of health for the county, and this was adopted. A Health Committee was appointed in the place of the Medical Officers' Report Committee; and at its first meetings it proceeded to elect a medical officer of health for the county. Dr. Eustace Hill was appointed at a salary of £500 per annum, one of the terms of his appointment being that "he shall be required to devote the "whole of his time to the duties of his office, and be "responsible for the proper transaction of all the "sanitary business the Council now has or hereafter "may acquire."

The active administration of its sanitary powers by the County Council really dates from the appointment of the Health Committee and the County Medical Officer, for prior to that time the Council had no means of ascertaining for itself the actual sanitary condition of the various parts of the county.

The following is a brief summary of the sanitary work accomplished by the County Council since the appointment of its Health Committee:—

I. Housing of the Working Classes.— Under the Housing of the Working Classes Act, 1890, the County Council has practically the same powers in rural districts as the local sanitary authority, and during the past four years the County Health Committee have been active in their endeavours to improve the dwellings of the working classes, as is evidenced by the fact that they have dealt with 1,011 houses which were reported by the County Medical Officer to be unfit for habitation. Of these, 709 have been made habitable, 164 have been closed, and 138 were being dealt with at the end of 1895. Of the houses that have been repaired, 222 were back-to-back and occupied by two tenants, and these have been provided with through ventilation, and with very few exceptions are occupied by only one tenant. Also 81 houses, which are included in the 709 repaired, were in the first place closed and afterwards re-built or thoroughly repaired.

Moreover, the attention given by the County Council to the dwellings of the working classes in the county has had the effect of stimulating the local authorities of many districts to exercise their powers with regard to insanitary houses, with the result that, generally, great improvement has been effected throughout the county in the spouting, drainage, privy accommodation, and sanitary surroundings of the houses.

2. RIVER POLLUTION.—At the very commencement of their work of endeavouring to prevent the pollution of the chief rivers of the county, the Council found that the provisions of the Rivers' Pollution Prevention Act, 1876, were not sufficient to enable it to deal effectually with some of the most serious cases of pollution by sewage. A representation was thereupon made to the Local Government Board as to

the necessity of amending and strengthening the Act, and in July, 1893, chiefly through the exertions of the County Council, a short Bill was passed by Parliament which amended the Rivers' Pollution Prevention Act, so that the County Council were enabled to deal with all cases of river pollution by sewage in their administrative area. But being possessed of the necessary powers to prevent the pollution of rivers, the Health Committee soon found that the powers could not be properly enforced unless they were supplied with reports by a competent officer as to the actual condition of the rivers, and the sources and situations of their various pollutions, and in January, 1894, the County Council sanctioned the appointment by the Health Committee of a County Inspector for the purposes of the Rivers Pollution Acts, and to act generally under the County Medical Officer in other matters relating to the public health of the county. The Inspector (Mr. Robinson) has, since his appointment, been occupied in inspecting and reporting on the pollutions of the rivers Wear and Tees for nearly their whole course, and in the following tables, prepared by the County Inspector, is given a summary of the work accomplished or in hand:-

RIVERS POLLUTION PREVENTION ACTS.

Summary of work done in the County of Durham, to December 31st, 1895, as a result of action taken by the County Council.

River Wear and Tributaries.

		Urban	Dis	TRICTS			F	URAL	. D151	RICTS			
	Bishop	Durham	Houghton	Spenny- moor	Willington	Auckland	Chester- le-Street.	Durham	Easington	Houghton	Sedgefield	Weardale	Total.
Total Number of cases dealt with	 1	38	4	5	2	30	45	32	1	11	7	37	213
No. of cases notified to:— (1) The Sanitary Authority—													
(a) By Statutory Notice(b) By Informal Notice only	 1	1	1	5	2	13 1	9	11	1	2 4	6		52 5
 (2) Owners or Occupiers— (a) By Statutory Notice (b) By Informal Notice only 	 	37	3			16	28 8	13 8		3 2		37	137 19
No. of Notices complied with	 	11	2	1*		9	17	13	1?	5	1	14	73
No. of Notices not complied with	 1	27	2	5	2	21	28	19		6	6	23	140
No. of cases withdrawn										٠.			
Nature of Pollution:—													
(1) Solid refuse (2) Sewage and ashes	 , .	10	٠.			٠.	8	٠,	٠.			٠.	18
(2) Sewage and ashes (3) Solid or liquid sewage matter	 1	26	3	5	2	20	34	1 27	1	10		$\frac{1}{27}$	3 162
(4) Coal washings			1			10	1	3			6	_,	162
(5) Lead washings	 	8										9	9
(6) Refuse from Dye works	 	2						1	ļ	• •			3
(7) Miscellaneous Pollutions	 						1			1			2

^{*} The works constructed here only purify about half of the sewage.



RIVERS' POLLUTION PREVENTION ACTS.

Action taken by the Local Authorities as a result of notice from the Durham County Council, to prevent the pollution of the river Wear and its tributaries.

COUNTY DISTRICT. URBAN.		Астіс	ON TAKEN.
BISHOP AUCKLAND	• •	Plans for sewage d to the L.G.B.	isposal works submitted
DURHAM	• •	Do.	do.
Houghton	• •	Sewage purification	n works constructed.
SPENNYMOOR-			
Spennymoor		Do.	do. do.
Low Spennymoor		Plans for sewage of preparation.	disposal works in course
Tudhoe Colliery		Do.	do.
Tudhoe Village	• •	Do.	do.
Tudhoe Grange	• •	Do.	do.
WILLINGTON-			
Willington		Plans for sewage consideration.	disposal works under
Page Bank Colliery	• •	Do.	
COUNTY DISTRICT. RURAL.		Астю	n Taken.
AUCKLAND			
Binchester Blocks	• •	Plans for sewage disp	posal works in preparation
Byers Green	• •	Do.,	do., do.
Newfield	• •	Do.,	do., do.
Todhills	• •	Do.,	do., do.
Sunnybrow	• •		sposal works submitted cil for consideration.
Witton-le-Wear	• •	Do.,	do., do.

COUNTY DISTRICT. RURAL.	Act	ACTION TAKEN.					
Auckland—Continued—							
Witton Park .	Application to be sewage dispos		w money for				
Escomb .	Do.,	do.,	do.				
Coundon .	Sewage disposal we enlarged.	orks construct	ed and since				
Etherley Dene .	Sewage disposal w	orks construct	ted.				
	Tank constructed,						
Seldom Seen :	Do	•	do.				
Hunwick .	Sewage disposal quation.	uestion still un	der consider-				
Toronto	Tank overflow cut	off from the r	iver.				
CHESTER-LE-STREET—							
Ropery Lane, Chester	-						
le-Street .	Plans for sewage di	sposal works in	n preparation				
Sewage Farm, do	Do.,	do.,	do.				
Chester Moor .	Do.,	do.,	do.				
Pelton Village .	Do.,	do.,	do.				
Pelton Fell .	Do.,	do.,	do.				
Primrose Hill .	Sewage disposal sideration.	question still	under con-				
Sixth Pit .	Do.,	do.,	do.				
New Lambton .	Tanks constructed.	•					
70							
DURHAM—	TD	1.01/ 1.1	, , , ,				
•	Precipitating tanks	s and filter bed	s constructed				
Belmont, Carville, an Broomside	TO 1 0 7 •	enogal works in	nrangration				
Ryanaanath	Do	do.,	do.				
The Avenue, Durhan		do.,	do.				
Chinaliffo	Da	do.,	do.				
		ио.,	uo.				
SunderlandBridge an Croxdale Village.		do.,	do.				
East Hetton .	Do	do.,	do,				
	,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					

COUNTY DISTRICT. RURAL.		Action Taken.					
Durham—Continued— The Pottery, Coxh							
Bridge	P	lans for sewage di	sposal works:	in preparation			
Coxhoe Villages	• •	Do.,	do.,	do.			
Easington-							
Easington Village	P	ollution of stream purposes preve	v	e for drinking			
Houghton-							
Hetton and East Rainton	S	ewage purification	n works cons	tructed.			
Newbottle, &c.	• •	Do.,	do.,	do.			
Middle Rainton	S	ewage disposal qu	estion under	consideration.			
West Rainton		Do.,	do.,	do.			
Rainton Freehold		Do.,	do.,	do.			
Leamside, &c.	• •	Do.,	do.,	do.			
Sedgefield—							
Coxhoe	A	joint scheme of prepared.	sewage disp	posal is being			
Ferryhill Village	S	ewage disposal qu	estion under	consideration.			
Ferryhill Brewery	• •	Do.,	do.,	do.			
East Howle		Do.,	do.,	do.			
Thinford	• •	Do.,	do.,	do.			
Cornforth		Do.,	do.,	do.			
West Cornforth		Do.,	do.,	do.			
Cornforth Lane		Do.,	do.,	do.			

RIVERS POLLUTION PREVENTION ACTS.

Summary of work done in the County of Durham, to December 31st, 1895, as a result of action taken by the County Council.

River Tees and Tributaries.

		1	BAN RICTS.	Ru Dist	RAL RICTS.	
		Barnard Castle.	Darling-ton.	Darling-ton.	Teesdale.	TOTAL.
Total Number of cases dealt with	• •	13	4	77	109	203
No. of cases notified to:— (1) The Sanitary Authority—						
(a) By Statutory Notice(b) By Informal Notice only		1	1	6 7	19	27
(2) Owners or Occupiers—						
(a) By Statutory Notice(b) By Informal Notice only	• •	12	3	49 15	37 53	101 68
No. of Notices complied with		2		65	49	116
No. of Notices not complied with		11	3	12	56	82
No. of cases withdrawn	•	• •	1		4	5
Nature of Pollution :—						
(1) Solid refuse		• •		1	8	9
(2) Sewage and ashes		• •		• •	8	8
(3) Solid or liquid sewage matter		12	3	75	89	179
(4) Coal washings	• •	• •			••	
(5) Lead washings	• •	• •		• •	4	4
(6) Refuse from Dye works	• •	1			• •	1
(7) Miscellaneous Pollutions	_ • •	•	1	1	• •	2

RIVERS POLLUTION PREVENTION ACTS.

Action taken by Local Authorities as a result of Notice from the Durham County Council to prevent the pollution of the river Tees and its tributaries.

COUNTY DISTRICT. RURAL.	Action Taken.
BARNARD CASTLE—	
Middleton-in-Teesdale	Sewage purification works in progress.
Egglestone	Application made to borrow money for sewage works.
Staindrop	Sewage purification scheme carried out.
Whorlton	Sewage disposal question under consideration
Winston	Tank put in and pollution prevented.
Gainford	Plans for sewage disposal works submitted to the L.G.B.
DARLINGTON-	
Blackwell	Tank overflow cut off from the Tees.
High Coniscliffe	Tank constructed and pollution prevented.
Low Coniscliffe	Do. do.
Hurworth Place	Sewage disposal question under consideration.
Middleton-one-Row	Do. do.
Sadberge	Do. do.

In the case of Durham city and the Barnard Castle urban and rural districts, as well as in several cases of individual pollution, the Council were ultimately compelled to resort to legal proceedings for the prevention of pollutions, and in all cases successfully.

3. ISOLATION HOSPITALS.—The Isolation Hospitals Act, which became law at the end of 1893, empowers County Councils, on application being made

to them by a local authority, or by 25 ratepayers in any district, or on a report of the county medical officer, to hold enquiries as to the necessity for the establishment of an isolation hospital for any particular district or districts, and after due enquiry the County Council may make an order establishing an isolation hospital for one, or more, sanitary district if it be proved to them that the sanitary authority is unable or unwilling to make suitable hospital accommodation.

During 1894 the County Health Committee directed their medical officer of health to report to them on the existing isolation hospital accommodation in the various districts of the county, and in September, 1895, the Health Committee arranged for a conference between a sub-committee of the County Council and representatives of the District Councils in the county, the outcome of which was the passing of a resolution by the conference that every local authority, either by itself or jointly with an adjoining authority, should provide its district with isolation hospital accommoda-During the last few years a number of local authorities in the county have provided their districts with isolation hospitals—though some of them are not of satisfactory construction—and in several other districts the erection of a proper isolation hospital has been decided on or is being seriously considered by the local authorities.

Without doubt much of this activity of the local authorities in this county in providing isolation hospital accommodation has resulted from the atten-

tion given to the matter by the County Health Committee. In several important districts there is no isolation hospital, and the Health Committee, acting on the reports of its medical officer, who has to some extent mapped out the county into isolation hospital districts, have appointed a sub-committee to hold enquiries under section 7 of the Isolation Hospital Act, with the object of causing suitable isolation hospital accommodation to be provided for these districts.

- 4. Infectious Diseases (Notification) Act. The Council have on several occasions directed the attention of local authorities to the desirability of adopting this Act, and it is satisfactory to note that since 1892 it has been adopted in 10 urban and 6 rural districts, having a population of 260,000. In December, 1895, the Act was in operation throughout the county, except in 3 urban and 1 rural districts.
- 5. Petitions to Parliament, Representations, &c.—In 1892 the County Council presented a petition to Parliament pointing out that the sanitary powers of County Councils were insufficient, and asking for additional powers. Since that time additional powers have been conferred on County Councils by an Act amending the Rivers Pollution Prevention Acts, by the Isolation Act, and by the Local Government Act, 1894.

In January, 1893, the Council resolved that the proper Government Department be asked to take the necessary steps for amending the law relating to death certificates and enquiries into the causes of deaths, and a reply was subsequently received from the Local Government Board that a select committee had been appointed to consider the subject.

A request was also forwarded to the Local Government Board that the county medical officer should be informed of medical enquiries held by the Board in the county as to the prevalence of disease or general sanitary administration, and after some correspondence the Local Government Board promised to give such information to the county medical officer at some stage of all such enquiries. The notice of the Local Government Board has been called to the need of amending the definition of the word "owner" as laid down in The Housing of the Working Classes Act, 1890.

The attention of the Health Committee having been called to the fact that the drinking water supplied by the Consett Water Company to a large population in the north-west of the county was not properly filtered, the Local Government Board were in January, 1894, requested by the County Council to require clauses to be inserted into a Bill, which was at the time being promoted by the water company for obtaining extended powers, providing for the efficient filtration of all drinking water supplied by the company. This action of the County Council resulted in a satisfactory clause being introduced into the Bill binding the water company to construct before the end of 1896 proper filter beds for filtering the water they supply for domestic purposes.

The following representations to the Local Government Board under sec. 19 (2) of the Local

Government Act, 1888, or sec. 299 of the Public Health Act, 1875, have been made by the County Council:—

DATE AND NATURE OF REPRESENTATION.

RESULT.

JAN., 1893:—

The pollution of the river Wear by sewage and by rubbish being deposited on its banks in the City of Durham.

APRIL, 1893:-

The dangerous quality of the drinking water supplied to the village of Chester-le-Street.

July, 1893:—

The dangerous quality of the drinking water supplied to Bishop Auckland from the river Wear.

Nov., 1893:—

The want of a proper water supply to the neighbourhood of Usworth in the Chester-le-Street rural district and its general insanitary condition.

Nov., 1893:—

The insanitary condition of houses in certain streets in the Spennymoor urban district.

The Rivers Prevention Pollution Act was afterwards amended so that the pollutions complained of could be dealt with by the County Council. A scheme for preventing the pollution of the river by the city sewage has since been adopted by the Corporation.

An enquiry was made by one of the medical inspectors of the Board, and subsequently legal proceedings were taken by the Rural Sanitary Authority under sec. 70 of the Public Health Act, 1875, to prevent the supply being used, but the case was dismissed. The water is still being used for drinking purposes.

Two formal enquiries have been held by the Local Government Board, who are still giving the matter their consideration. The Urban District Council propose to improve the means of filtration and storage of the water.

The water supply to part of the district has been improved, and a scheme is in progress for supplying the whole neighbourhood of Usworth with pure drinking water. The general sanitary condition of the district has been much improved.

The houses were either closed or put into a sanitary condition,

DATE AND NATURE OF REPRESENTATION.

RESULT.

APRIL, 1894:-

The want of a proper system of scavenging and removal of house refuse in the Auckland rural district, and the dangerous quality of the water supply to part of the village of Etherley Dene in that district.

Oct., 1894:—

The general insanitary condition of the village of Witton Park in the Auckland rural district owing to defects of sewerage and the insanitary system of excrement disposal.

Ост., 1894:—

The general insanitary condition of many of the houses in the villages of Hetton-le-Hole and Brickgarth in the Houghton rural district owing to the absence of privy and ashpit accommodation.

JAN., 1895:—

The unsatisfactory arrangements for scavenging and removal of house refuse in the Felling urban district and the insanitary condition of certain houses in that district.

The Local Government Board held an enquiry under sec. 42 of the Public Health Act, 1875, and subsequently made an order on the local authority to undertake or contract for the scavenging and removal of house refuse in most of the populous townships. The houses at Etherley Dene have all been supplied with pure drinking water.

The local authority have adopted a scheme for the main sewerage and the sewage disposal of the village. Many of the drains have been trapped and a large number of insanitary ashpit-privies have been abolished. The branch sewers are still generally very defective.

An enquiry was made by one of the medical inspectors of the board. The houses complained of now form part of the Hetton urban district. Those in Brickgarth have now been mostly put into a good sanitary condition, and those in Hetton-le-Hole are being dealt with.

No enquiry was held by the Local Government Board. The District Council referred the question of scavenging to its Sanitary Committee, and in Nov., 1895, it was adjourned for six months with the view of the cost of scavenging the whole district being obtained.

- 6. Complaints from Parish Councils.—Representations have been received from some of the Parish Councils, complaining under Sect. 16 (1) of the Local Government Act, 1894, of the default of the District Councils in discharging their duties under the Public Health Acts. Owing, however, to the representations being of too general a character, or not in the form required by the Act, the County Council were unable to take any formal action respecting them.
- 7. ACTION OF THE COUNTY COUNCIL BASED ON THE REPORTS OF ITS MEDICAL OFFICER OF HEALTH.— The county medical officer has each year presented a report dealing with the vital statistics and public health of the administrative county, and containing a summary of each of the annual reports of the district medical officers of health. These reports have been printed and copies sent to every local authority in the county. The county medical officer has also presented at each quarterly meeting of the Health Committee a report dealing with the sanitary condition of the districts he has inspected and with other matters which require the attention of the Committee. Copies of these reports have been sent to the local authorities of the various districts reported on, together with a circular letter inviting their attention to and observations on the sanitary deficiencies that are mentioned as existing in their districts.

The local authorities in the county have generally shewn a desire to remedy any sanitary short-

comings in their districts to which their attention has been drawn by the County Council, and as a result, very great improvements have been effected in matters of water supply, drainage and sewerage, house accommodation, excrement disposal and removal, &c., in many parts of the county.

- Administration.—As a result of formal application made to them under the Local Government Act, 1888, the County Council, after due enquiry, have made orders constituting urban districts at Stanley and Tanfield in the Lanchester union, and Hetton-le-Hole in the Houghton union, and also enlarging the urban district of Spennymoor by the inclusion of portions of the Durham, Sedgefield, and Auckland rural districts. The Council have similarly made an order constituting an urban district at Annfield Plain in the Lanchester union, but the order had not at the end of 1895 received the confirmation of the Local Government Board.
- 9. Work of the County Sanitary Staff. The sanitary staff of the County Council consists of the medical officer of health, the sanitary inspector (Mr. Robinson), and the medical officer's clerk. In addition to the inspectorial and office work entailed in the preparation of his annual and quarterly reports, the county medical officer attends all meetings of the County Council and its Health Committee, and has also been present at meetings of other standing committees to which he has been summoned. He has

also attended and frequently given evidence at Local Government Board enquiries held in the county as to the prevalence of disease and sanitary administration; and by his evidence he has supported applications for closing orders made by the County Council under the Housing of the Working Classes Act, and in several cases he has, at their request, given evidence in support of local sanitary authorities in prosecutions under the Public Health Acts.

He has on numerous occasions been consulted by, and held conferences with, local authorities in the county and their sanitary officers with reference to outbreaks of infectious disease, isolation hospital accommodation, sanitary administration, &c., and he has also had several conferences with medical inspectors of the Local Government Board on similar matters. Correspondence on all sorts of questions relating to public health and general office work occupy no inconsiderable portion of the time of the sanitary staff, and increase every year.

The county medical officer has, at the request of the Standing Joint Committee, inspected and reported on the sanitary condition of a number of the county police stations, and owing to outbreaks of infectious disease he has inspected the County Industrial School and the County Asylum, and reported on their sanitary condition to the controlling committees.

Other work of the county medical officer includes the tabulation each month of the returns of births and deaths supplied by the district registrars

from every district in the administrative county, and the preparation of a monthly summary showing the prevalence of infectious disease in every district of the county, from returns which, by the courtesy of the district medical officer of health, he regularly receives.

Since his appointment the county sanitary inspector has devoted the greater part of his time to work arising under the Rivers Pollution Prevention Acts, but he has also greatly assisted the county medical officer in his sanitary work, especially in revisiting districts in the county, on the sanitary condition of which the medical officer had previously reported.

In November, 1892, sanction was given to the medical officer to engage a clerk to assist him in his office. Mr. McDermid, who was then appointed, still holds the position, and has proved himself a most efficient and painstaking clerk. He is thoroughly acquainted with all the details of the office work, which, however, has so increased that it cannot now be properly accomplished by a single clerk.

BOROUGHS.

DARLINGTON.

James Lawrence, M.D., Medical Officer of Health.

Area in Acres, 3,945. Estimated Population, 1895, 41,000.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

29°O 15°5 2°4 169

Phthisis death-rate, 1.3; Respiratory diseases death-rate, 1.5. The birth-rate shows a considerable decrease, but the general, zymotic, and infant mortality-rates are all higher than the very low rates which obtained in 1894.

Infectious Diseases.

There were notified 49 more cases than in the previous year, scarlet fever, diphtheria, and enteric fever all being somewhat more prevalent. Enteric fever was rather prevalent between July and October, and caused 14 deaths during the year. There were 12 deaths from diphtheria and membranous croup, while diarrhæa, which was epidemic during the summer, caused 58 deaths. All houses from which infectious cases were reported were visited by the sanitary officials, and directions given as to the preventive measures to be adopted against the spread of the disease. 80 cases were removed to the borough fever hospital. The disinfection of houses after infec-

tious disease is, in some instances, left to the occupiers; but it is desirable that, except under the most exceptional circumstances, this work should be done by an officer of the sanitary authority.

General Sanitation.

There is stated to have been great activity during the year in the sanitary department of the borough, and 951 nuisances were abated after notice. Among other work, a large number of yards have been paved, and many of the old middens converted into water-closets or smaller ash-closets. Referring to the middens the medical officer says:—"I hope as "years go on we may be able to go on diminishing the "number of these abominations that abound in the "town." The scavenging and removal of house refuse appear to have been done fairly satisfactorily, but the report urges the frequent scavenging—at least once a fortnight—of the old and capacious ashpits.

A small quantity of unsound meat and fish was seized during the year and destroyed. Two prosecutions under the Food and Drugs Act were instituted, and the defaulters mulcted of small fines.

The factories and workshops, slaughter-houses, bake-houses, cowsheds and dairies have all received proper supervision during the year.

Sanitary Requirements.

The abolition of the old capacious middens and the provision of a public slaughter-house are both suggested in the report.

DURHAM.

A. M. VANN, M.R.C.S., Medical Officer of Health.

Area in Acres, 880. Estimated Population, 1895, 15,000.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

31'9 21'6 0'93 198

Phthisis death-rate, 2.06; Respiratory diseases death-rate, 4.8. The birth-rate shows a somewhat remarkable increase. The general death-rate and the infant mortality-rate were both very high, the cause of the latter being assigned to improper feeding, while the general death-rate was also increased by the large mortality from influenza and chest affections during the early part of the year.

Infectious Diseases.

Scarlet fever (129 cases) was the only prevalent disease, its incidence being most marked in June and July. The probable cause of the 24 cases of enteric fever notified is not mentioned in the report. The city enjoyed complete immunity from small-pox, diphtheria, membranous croup, and continued fever during the whole year. Nearly 50 per cent. of the scarlet fever patients were isolated in the city fever hospital, and in only one house did a second case occur to which a discharged patient had returned. Disinfection of infected houses is stated to have been performed by officers of the Corporation with very satisfactory results.

General Sanitation.

A scheme for dealing with the sewage of the city so as to avoid the pollution of the Wear has been

adopted during the year, and is at present receiving the consideration of the Local Government Board. Several prosecutions were instituted against persons depositing refuse on the river banks. Considerable progress has been made in substituting water-closets for the old privies and ashpits, and Dr. Vann points out that this improvement has brought very prominently forward the difficulty experienced in keeping these closets in a sanitary condition.

Sanitary Requirements.

None referred to, but I would point out that sec. 21 of the Public Health Acts Amendment Act, 1890, gives power to local authorities to summarily prosecute, without formal notice, the occupants of houses who foul or injure water-closets or other form of sanitary convenience which have been provided for the common use of two or more tenants.

HARTLEPOOL.

J. RAWLINGS, M.R.C.S., Medical Officer of Health.

Area in Acres, 552. Estimated Population, 1895, 24,000.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

34.5 18.5 2.5 165

Phthisis death-rate, 0.95; Respiratory diseases death-rate, 3.33. The above statistics, which are not quite so favourable as last year, include the deaths of 39 persons belonging to the borough who died in institutions outside, but exclude the deaths of 23 persons in the town belonging to other districts. The general death-rate was increased by the epidemic prevalence of influenza and infantile diarrhæa during the year.

Infectious Diseases.

Scarlet Fever was the only notifiable disease at all prevalent in the borough (117 cases), and was of a very mild type, only causing one death. The probable cause of the 23 cases of enteric fever is not stated. Whooping cough was very fatal during the spring and early summer, and diarrhæa caused a large mortality among young children during the hot weather of September. The majority of the cases of infectious disease notified were personally visited by the medical officer of health. The use of antitoxin in the treatment of diphtheria, when tried in suitable cases, was very successful.

General Sanitation.

Two houses were closed as unfit for habitation. More than 100 privies and ashpits have been abolished during the year and water-closets substituted for them. The licenses of two common lodging-houses have been forfeited. Of the 49 samples sent for analysis under the Food and Drugs Act, 3 were returned as being adulterated. The new houses built and occupied during the year numbered 78.

Sanitary Requirements.

The medical officer of health is of opinion that a destructor, the erection of which is contemplated, will be a great sanitary improvement and greatly promote the cleanliness of the borough; he also strongly urges that the water carriage system of excrement disposal is the only one permissible, and that "this method "should remain compulsory upon all property owners "within the borough."

JARROW-ON-TYNE.

J. M. NICOLL, M.B., Medical Officer of Health.

Area in Acres, 728. Estimated Population, 1895, 35,860.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

30'9 18'3 3'06 148

Phthisis death-rate, 1.9; Respiratory diseases death-rate, 4.1. The general death-rate is satisfactory and below the average, though higher than the very low rate for 1894. The infant mortality-rate is also very satisfactory, and of late years has progressively decreased in the borough.

Infectious Diseases.

The notifiable diseases were somewhat more prevalent than in the previous year. There were 3 cases of smallpox, the disease having been imported by a sailor who arrived in the Tyne on an infected vessel. The prompt action of the sanitary officials, assisted by early notification and facilities for the isolation of the patients prevented the outbreak from becoming serious. Scarlet fever of a mild type was very prevalent towards the end of the year, the disease being largely spread by the parents neglecting to call in medical attendance and sending their children back to school, after an attack, while in an infectious state. The disease was noticed to be chiefly confined to children attending two schools, and on examining them several were found to be desquamating and in an infectious state. The invariable plea of the parents in such cases is ignorance, and the only way of preventing the attendance at school of children suffering from infectious diseases appears to be

a frequent and systematic inspection of all the scholars by a school medical officer.

Some of the cases of diphtheria could be attributed to defects of drainage, and there was a dampness of the surroundings of many of the houses in which cases occurred.

Enteric fever was at no time prevalent during the year, but the report points out that it is probable that the existence of defective and offensive middenprivies was responsible for many of the 50 cases notified. There were 27 deaths from diarrhæa, and nearly all the deaths were among children who had been artificially fed. Measles and whooping cough were responsible for 60 per cent. of the zymotic deaths, and Dr. Nicoll's remarks respecting these diseases are so pertinent that I cannot do better than quote them. He says:—"Now these are diseases which are eminently "amenable to treatment. Unfortunately however, they "are looked upon by the great mass of the people as "being very trivial and hardly worth troubling about, "with the result that we have a mortality from them "which should not occur, and does not occur where "proper means of treatment are carried out. This "mortality, in some cases, is undoubtedly unavoidable, "but in other and by far the great majority it is due to "nothing more or less than gross carelessness and "negligence on the part of the parents." Owing to the prevalence of measles the Sanitary Committee took the wise precaution of ordering all the infant schools in the borough to be closed in April for one month,

which period of closure it was found necessary to extend for another fortnight. 100 cases of infectious disease were removed to the isolation hospital, and of these only 2 died. Dr. Nicoll points out that the small-pox hospital is in far too close proximity to the isolation hospital, and he urges the necessity of procuring a site much more isolated than the present one; he thinks the time opportune for Jarrow and Hebburn to combine together to provide a proper small-pox hospital. A discharge room and additional water-closets are about to be provided for the present isolation hospital.

General Sanitation.

676 notices under the Public Health Acts were served during the year for the abatement of nuisances. Among the sanitary improvements effected are the repairing of the insanitary property at the Old Church and the remedying of some defects to bad property at East Ferry. The town's refuse is now sent to sea, and "the scavenging is on the whole satisfactory." Nearly 100 ashclosets have been substituted for midden-privies during the year. The pig-styes on the Pit Heap are stated to be in an unsatisfactory condition. The question of a public slaughter-house is receiving the attention of a special committee, and other matters dealt with in the report are trade nuisances, bake-houses, Food and DrugsAct, unwholesome food, prosecutions for exposure of infected persons, &c.

Sanitary Requirements.

r. The erection of a small-pox hospital on a well isolated site; and a combination with the urban

district of Hebburn for this purpose, as suggested in the report, should be both economical and efficient.

of the isolation hospital. In support of this suggestion Dr. Nicoll says:—"I have no doubt whatever that in "some of the cases, and especially in the typhoid "wards, the lowering of the temperature which follows "the scrubbing of the floors had an injurious effect on "several of the patients."

STOCKTON.

THOMAS HORNE, M.D., Medical Officer of Health.

Area in Acres, 2,848. Estimated Population, 1895, 54,000.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

30'18 18'5 4'5 202

Phthisis death-rate, 1.85; Respiratory diseases death-rate, 2.74. The general death-rate exceeded by 1.8 per 1,000 the rate for 1894, and both the zymotic death-rate and infant mortality-rate were very high. Dr. Horne, who devotes his whole time to the duties of the office, was only appointed in July, and "the "text of the report will therefore, except incidentally, "deal solely with the period which elapsed between "that date and 31st December last." The report, however, is most complete and valuable.

Infectious Diseases.

The number of cases was larger than in any year since notification has been compulsory. Scarlet fever was very prevalent throughout the year (732 cases), and its case mortality was 4.2 per cent. Although the efforts made to check the spread of scarlet fever met with only partial success, removal to

and isolation in hospital were most valuable, for "such "proceedings not only reduced the number of infectious "centres, but it also acquired for many patients far better "hygienic surroundings than they could otherwise have "had, and so undoubtedly lessened the severity of "their attacks."

Enteric fever was more prevalent and fatal than in any year since 1891, and Dr. Horne points out that "year after year, for a long time there has been "undue prevalence of enteric fever in the borough of "Stockton-on-Tees." During 1895, there were 187 cases reported, and of these 160 occurred during the last six months. A considerable portion of the report is devoted to the consideration of the causes of the prevalence of enteric fever, and Dr. Horne concludes that the condition of the sewers and the insanitary system of excrement disposal of the greater part of the town (midden-privies) were largely responsible. suspicion could be attached to the water supply as a cause of enteric fever, and "I think that, as a carrier " of enteric fever throughout the district generally, "milk may be disregarded," though there was some evidence that one particular milk supply may have played some part in its diffusion. Infantile or summer diarrhœa was extremely prevalent and fatal, the 131 deaths being equal to a rate of 2.4 per 1,000 population. Referring to this disease, Dr. Horne says:-"It is "well to remind the Council that epidemic diarrhæa is "eminently a preventable disease. Speaking in broad "terms, it may be said that had the 131 children who

"died of this disease in Stockton last year lived under "rural instead of urban conditions, a very large per-"centage of them would have survived. "statement indicates coarsely the nature of measures "which are calculated to prevent epidemicity of the "disease. Free ventilation, plentiful sunlight, and "comparative freedom from accumulations of filth near "to the dwellings are conditions that prevail in country "districts, while they are largely absent in towns. The "nearer, therefore, that urban existence can be made to "approach rural life the less liability will there be to "epidemic diarrhœa. A great deal can be done—and "done with far greater success than is generally re-"cognized—even in town to prevent this fatal disease." 237 cases of infectious disease were removed to the borough isolation hospital for treatment. The town is without any hospital for the isolation of cases of smallpox, but the borough engineer has been instructed to prepare a plan and estimate of a proposed hospital to be erected on a site in the rural district about 11/2 miles from the town.

General Sanitation.

The houses in the south-east ward are mostly very old. Many of them are tenement dwellings, and there is considerable crowding of houses upon area, and consequently provision for air, light, and ventilation is defective. In other parts of the town the houses are mostly of newer date, but "there are many streets "of small houses built apparently without the least "regard to the proper provision of those essentials to

"health which I have named." The method of excrement disposal most common in the town is that of the common privy and ashpit, and there are also a large number of moveable pans, while almost all the betterclass houses have water-closets. The contents of the middens are removed monthly, and those of the moveable pans weekly. Referring to the middens, the report states that, "especially in the lower parts of the "town, large numbers of privies are very near to "dwellings. In very many instances the soil is carried "through the dwelling. Almost all the vaults in "connection with the privies are exceedingly capacious." "The vault-floors are frequently sunk below the "surrounding ground level, and are as often pervious" . . . "The plan on which the privies are usually "constructed offers no facility for the application of "dry ashes to the excrement, consequently it is com-"mon to find a heap of excrement surrounded by liquid "filth in one part of the pit, and a heap of ashes at a "distance. It is perfectly impossible to cleanse effectu-"ally vaults of this description; moreover, as can "readily be conceived, when once such receptacles "become specifically contaminated by the dejections of "anyone suffering from such diseases as enteric fever "or cholera, they may be a source of danger, after "even the best attempts have been made to disinfect "them." Referring to the moveable pans, Dr. Horne says that "used as they generally are, they are pro-"ductive of grave and dangerous nuisance."

The district is without a complete system of

sewerage, but sewers of a certain kind—some few constructed on modern, but the majority on old and obsolete lines—exist throughout the town. The old sewers are stated to be badly made, of faulty gradients and frequently leaky, and without efficient ventilation, and flooding of cellars and basements with sewage has not been uncommon in many parts of the district. The private drains are far too commonly of inferior workmanship, and their sewer connections are often found to be imperfect. They are usually provided with proper traps, "but they are not seldom found to "be improperly fixed."

The various sewers of the district are but inefficiently ventilated, and they are not provided with proper means of flushing.

The water supply to the town is considered a safe and wholesome one, though at times it is discoloured and has an uninviting appearance. Steps are now being taken by the water company to remedy the defects by means of filtration, &c.

There are 34 registered or licensed slaughter-houses in the town, which have been regularly inspected, but the majority are stated to be unsatisfactory. "Many are structurally unfitted for their "purpose; some are too small, not a few are much too "near dwellings or unhealthy surroundings, and the "approach to others is inconvenient. All such defects "tend to render those establishments detrimental to "health,"..... "and I am certain the Council "would do well to provide public slaughter-houses."

A considerable quantity of unsound meat was destroyed during the year. No action was taken under the Food and Drugs Acts or the Margarine Act. Only about 15 workshops have been inspected and registered during the year, and as there are nearly 300 workshops in the town, the majority have not been dealt with as provided for by the Factory and Workshops Acts. There are 35 registered common lodging-houses in the town, and with a few exceptions these are stated by the inspector to have been kept in a very fair condition. The sanitary inspector reported that the nuisances abated or sanitary improvements effected during 1895 numbered 3,750.

The town is without any bye-laws with respect to the prevention of nuisances, new streets and buildings, houses let in lodgings, and offensive trades. The need for nuisance prevention and building byelaws is stated to be especially pressing, and referring to the want of building bye-laws, Dr. Horne says:-"During the last few years many dwellings have been "erected, which will, I believe, in a few years become "insanitary. Moreover jerry buildings is going on at "the present time. Quite recently I witnessed the "laying of the foundation of certain dwellings, and "watched the progress of the houses subsequently. "No trench of any kind was dug for the foundations, "and the bricks were laid on the surface of the bare "ground. There was no preparation whatever of the "site, which was entirely upon ground which had been "made for a depth of several feet only a few weeks

"before. No damp proof course was inserted in the walls, many of which are, in my opinion, very inferior specimens of the builders' arts. Speculative builders who build this class of property can scarcely be blamed if the sanitary authority allows them to do so; but surely the district should be protected against the establishment of conditions which must inevitably, ere long, menace the well-being of no inconsiderable section of the community."

Regulations under the Dairies, Cowsheds, and Milkshops Order, 1885, have been adopted by the Town Council, and are now before the Local Government Board for approval. The Council have also adopted Part III. of the Public Health Amendment Act, 1890.

A house-to-house inspection of a portion of the town has been made by the sanitary officials and borough surveyor, and special inspections and enquiries have been constant. Dr. Horne makes it a rule to visit all dwellings from which cases of enteric, typhus, or continued fevers or diphtheria are reported. The proportion of children successfully vaccinated in Stockton of recent years is nearly 95 per cent., which is certainly satisfactory.

Sanitary Requirements.

The following recommendations are made in the report:—

- 1. The inclusion of erysipelas among the notifiable diseases.
- 2. The adoption of the Infectious Diseases Prevention Act, 1890.

- 3. The adoption of bye-laws with respect to offensive trades, houses let in lodgings, and especially the erection of new buildings, and the prevention of nuisances.
- 4. The employment of smaller pans than those at present used for the reception of the excreta of typhoid patients.
- 5. The systematic disinfection by steam of all infected articles of bedding and clothing.
- 6. The provision of public slaughter-houses.
 In addition, energetic action is required of the Sanitary Authority with respect to:—
- ment disposal which mostly obtains in the district, and which without doubt is one of the chief causes contributing to the high mortality from diarrhœa among children, and from enteric fever.
- 2. The defective state of many of the sewers and house drains.

WEST HARTLEPOOL.

S. Gourley, M.D., Medical Officer of Health.

Area in Acres, 2,454. Estimated Population, 1895, 50,020.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

34.8 16.2 3.43 148

Phthisis death-rate, 1.25; Respiratory diseases death-rate, 2.13. The zymotic death-rate is very high owing to the excessive mortality from summer diarrhæa, but the other mortality statistics, though slightly higher than last year, are satisfactory.

Infectious Diseases.

The notifiable diseases were more prevalent

than in 1894 judging by the number of cases notified. Scarlet fever and enteric fever were most prevalent, and the incidence of each disease was greatest in the month of September. Both diseases were rather fatal, the case mortality of scarlet fever (nearly 9 per cent.) being very high. No common cause of the enteric fever could be discovered, but the cases mostly occurred in houses on the south side of the town which had been built on foundations of "made soil" of all sorts. No fewer than 15 of the 23 cases of diphtheria and membranous croup notified died, and most of the cases occurred in clean new houses where no sanitary defects were discoverable. Diarrhœa caused 111 deaths, or more than four times as many as in the previous year, and Dr. Gourley says :- "The chief causes of infantile "mortality from summer diarrhæa are improper feed-"ing, such as 'boiley,' soured milk, &c. Hereditary "disease contributes a great deal to the infant mortality "bill, and years of observation lead me to think that "insurance and mortality are more closely connected "than most people are aware of." The number of infectious cases isolated in hospital was 35, and all the cases notified were visited, and the necessary precautions taken, by the officers of the Corporation.

General Sanitation.

Seven polluted wells were closed during the year, and the town water supply substituted. The new public slaughter-houses are now in use, and satisfactory in every respect. The important question of compensation to the butchers in cases of tuberculosis still

remains to be dealt with, but Dr. Gourley thinks that when a beast, bought in an open market and killed in a public abattoir, is found to be so diseased as to be unfit for food, it should, if destroyed for the public safety, be paid for out of the public purse. A considerable quantity of tuberculous meat and almost imported fruit was destroyed as unfit for food. The report urges the Health Committee not to grant any more licenses to common lodging-houses unless the houses are built for that particular purpose.

The sewer survey has now been completed by the borough engineer, and where bad defects have been found they have been repaired, "but the result of "the survey seems to point to the necessity of an "extensive new sewerage system at no distant date in "order to effectually meet the growing needs of the "town." Under the Food and Drugs Act 36 samples were taken, 3 of which were adulterated and 2 of doubtful quality. The report points out that the town unnecessarily suffers from dense volumes of smoke pouring out of certain chimneys, and that more stringent measures are needed in dealing with smoke nuisances. There was considerable activity in the inspector of nuisance's department during the year, and notices were served for the abatement of 1,062 nuisances, and in several instances legal proceedings had to be taken to enforce them. Thirteen houses were condemned as unfit for habitation.

Sanitary Requirements.

None specially referred to, but the medical

officer of health's remarks on the occurrence of cases of enteric fever in houses built on "made ground," and with respect to the sewerage of the town, new streets, and smoke nuisances are deserving of careful consideration.

URBAN DISTRICTS.

BARNARD CASTLE.

Alfred H. Sevier, M.B., Medical Officer of Health.

Area in Acres, 533. Estimated Population, 1895, 4,341.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

23.9 19.2 1.38 86

Phthisis death-rate, 0.92; Respiratory diseases death-rate, 3.91. The above statistics are satisfactory. The total death-rate was 20.04, but the report states that 15 of the deaths in the town were those of persons belonging to other districts.

Infectious Diseases.

Only 10 cases were notified during the whole year. The 2 cases of enteric fever occurred in Bede Terrace, where on previous occasions there have been cases, and the report attributes the outbreak to the privy-middens attached to the houses. There was a considerable outbreak of measles at the beginning of the year, but no death occurred from the disease. No case of infectious disease was removed to the isolation hospital.

General Sanitation.

A new sewer has been laid down and some progress has already been made with the new sewage disposal works. An inspection of the police station

showed it to be in a very insanitary condition, but the defects were remedied and the station put into a good state of sanitary repair. The report strongly urges the abolition of the privy-middens at Bede Terrace, and the provision of water-closets in their stead. The water supply to the town is stated to have been plentiful and good throughout the year. The slaughter-houses have been regularly supervised as also the common lodging-houses, but no action was called for with regard to offensive trades, factories, or work-shops.

Sanitary Requirements.

The insanitary ashpit-privies at Bede Terrace should be abolished as suggested in the report.

BENFIELDSIDE.

GEORGE RENTON, M.D., Medical Officer of Health.

Area in Acres, 1,525. Estimated Population, 1895, 7,000.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

29.8 I 6.7 I 7 I 82

Phthisis death-rate, 1.5; Respiratory diseases death-rate, 2.4. The infant mortality-rate is greatly in excess of last year, but the general death-rate and other mortality statistics are fairly satisfactory. Dr. Renton thinks that many of the infant deaths were avoidable, and the result of improper feeding and careless exposure.

Infectious Diseases.

The only notifiable disease at all prevalent was enteric fever, and 51 of the 85 notifications received were of this disease, which was very prevalent in October and November, when 38 cases were

reported. The greatest number of cases occurred in the high part of the town, and many of them in newly constructed houses whose sanitary surroundings were apparently satisfactory. Dr. Renton does not think the milk or water supplies were to any extent accountable for the diffusion of enteric fever, though he points out that two dairies supplying milk were in a most insanitary state, but he says:-"that the disease was "disseminated in many instances owing to the fouling "of the air by emanation from infected drains and "sewers, where the traps were imperfect, to the im-"perfect destruction of the excreta from infected "persons, causing the privies to become specifically "infected, and, to some extent, to direct infection, I "am convinced." The low mortality from the disease is attributed to the care and attention given to the cases by the district nurse. Diarrhœa was very fatal during the autumn months and caused 7 deaths, but only 5 cases of scarlet fever were notified during the whole year.

General Sanitation.

The sanitary improvements effected during 1895 include the laying down of 40 yards of new main drain, the reconstruction of many privies and ashpits, and the opening of the new sewage disposal works, by which the sewage, after precipitation and subsidence, is passed through artificial filters of sand and magnetone. These works are said to work satisfactorily. The ashpits and middens in the town are often very objectionable and insanitary, as they are said to

be of bad construction, usually uncovered, with the floors below the level of the surrounding ground, and often in too close proximinity to dwellings.

Sanitary Requirements.

- 1. The District Council should take systematic action for the gradual abolition of the many insanitary midden privies which exist in the town, and which were probably largely responsible for the outbreaks of enteric fever during 1893—4.
- 2. The sites of all new houses should be rendered impervious, so that neither ground air nor moisture can find their way in to the dwellings.

BISHOP AUCKLAND.

T. A. McCullagh, M.R.C.S., Medical Officer of Health.

Area in Acres, 692. Estimated Population, 1895, 11,847. Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate. 35'7 19'3 3'03 158

Phthisis death-rate, 1'94; Respiratory diseases death-rate, 1'43. The above statistics are calculated on a population more than 1000 in excess of the population estimated on the rate of increase of population during the decennium 1881—1891, but the report states that 120 new houses have been built since the last census, and that many houses then empty are now occupied, so that the increased estimate of population is held to be justified.

Infectious Diseases.

The town is still without the protection afforded by the Infectious Diseases Notification Act, and the record of the prevalence of these diseases is

therefore necessarily incomplete. Enteric fever was however known to be prevalent, though it was not so fatal as in the two previous years. The medical officer of health thinks that the disease is often spread by the carelessness of the inhabitants, who throw the excreta of the patients undisinfected into the ashpits, which then act as foci of infection, and he has "hesitation in ascribing the typhoid fever in Bishop "Auckland purely to our water supply." Measles was very prevalent towards the end of the year, and was responsible for 8 deaths. Five cases were treated in the isolation hospital, and plans have been prepared for its enlargement.

General Sanitation.

The water supply is still obtained from the river Wear, and to make it satisfactory the report states that three improvements are necessary, namely: (1st) Improved filtration; (2nd) Increased storage; (3rd) Prevention of sewage contamination. Plans for carrying out the first two requirements have been adopted, and are awaiting the sanction of the Local Government Board. Sewage from the towns and villages above the intake is, however, still being discharged into the river, though several schemes for preventing the pollutions are under consideration. The scheme for the removal of the sewage of Bishop Auckland from the river Wear has been approved by the Local Government Board. 57 formal notices under the Public Health Acts were served, and during the year 359 nuisances are reported to have been abated.

Sanitary Requirements.

- The adoption of the Infectious Diseases Notification Act.
- 2. A proper isolation hospital; the present hospital, owing to its construction and want of accommodation is unsuitable.
- 3. A water supply from a purer source than the river Wear.

BLAYDON.

Philip Brown, M.D., Medical Officer of Health.

Area in Acres, 79,349. Estimated Population, 1895, 16,000. Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate. 35'O 18'5 3'68 212

Phthisis death-rate, 0.93; Respiratory diseases death-rate, 3.68. Both the zymotic death-rate and infant mortality-rate were very high, while the total death-rate was above the average of previous years.

Infectious Diseases.

Scarlet fever was the most prevalent disease (62 cases), and nearly half the cases were notified in December. Enteric fever (60 cases) and continued fever (22 cases) were also very prevalent in the latter half of the year, and 10 deaths were attributed to the former. Dr. Brown thinks it very doubtful if some of the cases notified were really cases of enteric fever, and he points out that while in the first half of the year the case mortality from enteric fever was 27 per cent., in the last six months it was only 7 per cent. As to the cause of the enteric fever prevalence, Dr. Brown says:—"This matter was treated at some length in my "last month's report, repetition could only weary you.

"I will, however, venture once more to urge my "suspicions as to the character of the water supplied to "the people in the eastern portion of Blaydon, where "seven-eights of the fever cases have occurred, and ask "that your Board will kindly place in my hands an "analysis of the water in the Blaydon Bank Reservoir, "once or twice in the year at least." Infantile or summer diarrhæa was very fatal during the third quarter of the year. The isolation hospital is stated to have been of great value, and 33 cases of scarlet and enteric fevers were removed to it.

General Sanitation.

A report was prepared during the year by the medical officer of health and surveyor on the water supply of the district, and the present supply, judging by the remarks above quoted, suggesting some connection between the water supply and the prevalence of enteric fever, appears to be far from satisfactory in some parts of the district.

39 defective houses are stated to have been put into a proper state of repair and made fit for habitation. A number of old midden-privies have been abolished and small ash-closets substituted, while 90 ashpit-privies are stated to have been repaired. Galvanized pail-closets have been provided for certain houses where, owing to the want of space, proper conveniences could not be erected, and these are emptied three times weekly. The District Council, in conjunction with the Lanchester Rural District Council, are constructing sewerage and sewage disposal works for

Blackall Mill, which it is expected will be completed during the early part of 1896.

95 new houses were built in the district during the year.

Sanitary Requirements.

If the water supply to the eastern portion of the Blaydon district is liable to pollution and, as the report suggests, may have been the cause of the prevalence of typhoid fever, steps should at once be taken to provide a better and purer supply.

BRANDON AND BYSHOTTLES.

HENRY SMITH, M.B., Medical Officer of Health.

Area in Acres, 6,683. Estimated Population, 1895, 15,504.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

35.3 19.9 4.52 204

Phthisis death-rate, 0.25; Respiratory diseases death-rate, 5.54. The general death-rate compares very unfavourably with that of the three previous years, owing largely to the large mortality from diseases of the respiratory system. The zymotic death-rate and infant mortality-rate were also very high.

Infectious diseases.

Of the 318 cases notified 241 were of scarlet fever, and 172 of these were from the east ward. Enteric fever was the next most prevalent disease (27 cases and 9 deaths). The mortality from nearly all the zymotic diseases was high, but the report does not refer to its causes. 84 patients were isolated in the fever hospital, but "so far it has been impossible to "persuade the people that isolation is necessary." Referring to the isolation hospital Dr. Smith says:—

"In October your Council decided to admit only cases of scarlet fever. For this purpose alone the hospital is too small at the present time, and there is no provision made for the isolation of patients suffering from typhoid fever or other infectious disease."

General Sanitation.

Two farms in the district have been provided with a good supply of water. Improvements have been effected in the spouting of the houses at Brandon Colliery, and in the drainage of North Terrace and Hedley Hill Terrace. At Waterhouses the report states that the ashclosets at West Terrace and South Terrace have been converted into privy-ashpits, but such an alteration is certainly not an improvement and should not be permitted. At Littleburn the houses have been properly spouted.

The scavenging of the district has been performed satisfactorily by contract, and the ashpits were disinfected after being cleaned out.

The cowsheds were inspected during the year and found to be in a much better condition than in former years. "No offensive trade is carried on in "the district, and there are no common lodging-houses "and no tenemented property."

Sanitary Requirements.

- 1. The provision of increased accommodation at the isolation hospital.
- 2. The District Council should not permit the erection of any more ashpit-privies in their district either to new or old property. Every year that passes

adds to the proof that the midden or ashpit-privy system of excrement disposal in populous districts is one of the chief causes, if not the greatest factor, of the prevalence of infantile diarrhæa, enteric fever, and probably other zymotics, and it is therefore to be regretted that the District Council should have permitted the substitution of ashpit-privies for the smaller and more sanitary ashclosets at West Terrace and South Terrace, Waterhouses.

CONSETT.

GEO. RENTON, M.D., Medical Officer of Health.

Area in Acres, 993. Estimated Population, 1895, 8,800.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortlity-rate.

34.5 18.8 3.5 167

Phthisis death-rate, 2.2; Respiratory diseases death-rate, 3.7. The general death rate is higher than 1894, but not above the average of the rate for the previous five years. The high death-rate in the third quarter of the year (23.1 per 1,000) and the high zymotic death-rate were almost entirely caused by the large number of deaths from enteric fever.

Infectious Diseases.

Enteric fever (143 cases) and erysipelas (52 cases) were the only prevalent diseases. In 1894 the only zymotic deaths were from measles and whooping cough, but last year there was not a single death from either of these diseases. The report deals at length with the prevalence of enteric fever in the town. With the exception of March, 3 or more cases were notified in every month up to September, though up to that time the disease was not markedly prevalent. At the

beginning of September, though, it became alarmingly epidemic, and continued so during the whole of that and the following month. In November the epidemic began to subside, but during that month and December a number of cases were notified. The disease was not confined to any particular part of the town, and many of the cases occurred in comparatively new and sanitary houses, which would seem to point to some common cause, but of that Dr. Renton was not able to satisfy himself. As to the cause of the epidemic the medical officer of health says :-- "With regard to the origin of "the outbreak, it is difficult to arrive at a definite con-"clusion, but I have no doubt that its diffusion was "mainly due to the fouling of the air by emanations from "infected drains and sewers; the accumulation of filth; "the imperfect destruction of the excreta from infected "persons, causing the privies to become specificially in-"fected; and to some extent to direct infection." Renton does not think that the milk or water supplies were to any considerable extent responsible for the epidemic, "but it is within the bounds of possibility that where "defective joints in the water mains may have existed "contaminated matter may have been drawn into the "water pipes by lateral insuction, and thus poisoned "the water supply over a wide area." The type of the disease was remarkable in that in many cases most of the more prominent symptoms were absent, and Dr. Renton has no doubt that many of the cases notified were not enteric. The mortality was very high, and "I have no doubt that many of the deaths were largely

"due to imperfect nursing, and this may, to some "extent, account for the excess in the mortality over "that of a neighbouring district where a trained nurse "was provided." Precautionary measures were adopted by the District Council against the spread of the epidemic, such as the issue of printed instructions, isolation of the patients, disinfection and flushing of drains and sewers, &c. With regard to the prevalence of erysipelas (52 cases), Dr. Renton says:-"There "seemed to be no connection between any of the cases, "and the cause would seem to point to there being "some sanitary deficiency, such as those referred to "under the enteric fever report." Eleven cases of enteric fever were removed to the isolation hospital at Leadgate for treatment. The report states that "the Notification Act has proved very useful and would "be more so if the cases were notified at once."

General Sanitation.

Referring to the dwellings of the working classes, the older houses are stated to be of poor construction, with midden-privies frequently close to the back doors, and the house drains running close to the walls and defective; as to the more modern dwellings "the chief defect lies in the sites not being impervious "over their whole area, so that moisture and ground "air have free access to the houses. The yards too "are not in every instance properly paved or cemented." 71 new dwellings were completed and tenanted during the year. Referring to the ashpits, middens, &c., the report states: —"These have always been a stumbling

"block in your district, both with regard to their con"struction, their extent, the absence of provision for
"an admixture of ashes with human excreta, to the
"fact that their foundation is often below the level of
"the adjacent ground, that they are placed too near to
"dwellings, and that the system adopted for their
"cleansing is not effective. There does not appear
"to be any hope of the latter being effectually carried
"out until it is undertaken by your authority."

A proper register is kept of the cowsheds, dairies and slaughter-houses, but "the byres were in "many instances anything but clean. The lighting "and ventilation were imperfect, and the drainage "defective."

Sanitary Requirements.

- I. The provisions of the Housing of the Working Classes Act, 1890, should be enforced with regard to the insanitary houses in the district.
- 2. The District Council should insist that the sites of all new houses should be made impervious to ground air and water, and that all yards should be well cemented or paved.
- 3. The abolition of the many grossly insanitary ashpit-privies which exist in the town, and the undertaking by the District Council of the scavenging and removal of house refuse.
- 4. A more stringent sanitary supervision of the cowsheds, dairies, and slaughter-houses.
- 5. New sanitary and building bye-laws are most urgently needed.

FELLING.

M. F. Kelly, L.F.P.S., Medical Officer of Health.

Area in Acres, 2,684. Estimated Population, 1895, 20,000.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

38.4 22.3 I.85 225

Phthisis death-rate, 1'2; Respiratory diseases death-rate, 4'5. The high total death-rate of previous years was again maintained, even when calculated on a largely increased estimated population. The infant mortality was again excessive, and is attributed to improper food and exposure.

Infectious Diseases.

Scarlet fever was by far the most prevalent, two-thirds of the cases notified being of that disease. The district most affected was Felling proper, but only 2 deaths resulted during the year, so that the disease was evidently of a mild type. There were 22 cases and 5 deaths from enteric fever, and the cause of some of the cases is attributed to insanitary ashpit-privies. The town is still without any means of isolating cases of infectious disease, although the site for an isolation hospital has been purchased. Dr. Kelly says "I hope "the Board will not lose sight of the matter, and the "possibility of an epidemic breaking out at any "moment."

General Sanitation.

A number of streets of good working-men's dwellings have been built in the Felling and Heworth districts, and they are provided with ash-closets. Referring to the housing of the poor, the report states that "both at Windy Nook, Felling, and Heworth,

"a lot of old property will have to be condemned in "the near future, damp walls being the chief cause of "complaint." The scavenging of the district is said to have been well performed during the year, and butcher's offal is now removed at stated times by the carts of the District Council, instead of allowing it to accumulate and become a nuisance as was formerly the The dairies, byres, and slaughter-houses are stated to have been kept under observation, and no fault was found with them during the year. informal written notices were served for the abatement of nuisances, as well as 14 formal notices by the District Council with respect to houses unfit for habitation. At Quarry Row, where several cases of enteric fever occurred, some sanitary improvement was effected, but the whole row of houses require structural alterations before any sanitary improvement can be expected.

Sanitary Requirements.

- 1. The provision of an isolation hospital and disinfecting apparatus.
- 2. The remedying of the sanitary defects at Quarry Row.
- 3. The report again recommends that a public recreation ground should be provided for the district.

HEBBURN.

GEORGE N. WILSON, M.B., Medical Officer of Health.

Area in Acres, 1,180. Estimated Population, 1895, 18,252.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

38.8 19.0* 3.38 193

Phthisis death-rate, 1.4; Respiratory diseases death-rate, 3.11. The total and zymotic death-rates, as well as the infant mortality-rate, were considerably higher than in 1894, a result almost entirely due to the large mortality from infantile diarrhæa, the death-rate from diarrhæa alone being 2.38 per 1000 population. The death-rate was highest in the colliery district of the town.

Infectious Diseases.

The only notifiable disease at all prevalent during the year was scarlet fever (111 cases), and it was of a very mild type, causing only one death. The disease was most prevalent in the colliery district, owing to the houses being small and crowded, and to the inhabitants of this part of the town showing a disregard of the instructions for isolation. There were 37 cases of erysipelas notified, but considering the large population it is very satisfactory that there were only 8 cases of typhoid fever and 7 of diphtheria notified during the whole year. The high mortality from diarrhœa is stated to have been more dependent on climatic influences than on local sanitary defects. Of the 38 cases treated at the isolation hospital only one died. Included in the report is an able special report,

^{*} Including 10 deaths in Workhouse, and 2 deaths in County Asylum belonging to district.

dated May, 1895, in which the necessity of erecting a suitable isolation hospital and disinfecting apparatus for the district is pointed out.

General Sanitation.

The chief improvement effected appears to have been the abolition of 36 insanitary midden-privies, 146 small ashclosets having been provided in their stead. Referring to the oldfashioned middens, 925 of which still exist in the town, Dr. Wilson says:-"Many of them have no concrete bottoms, and there "can be no doubt but that the noxious gases, oozing "into the subsoil, are drawn into the houses by means "of the suction caused by the heating of the houses." "However, impossible as it is to condemn them whole-"sale, it is satisfactory to find that year by year they "are being replaced by the more sanitary dry closets." Other improvements effected include the cementing and repairing of ashpit-privies, and 204 notices have been served for the abatement of nuisances. One house was closed during the year as unfit for habitation. The drainage of several streets in the colliery district is being re-arranged and made sanitary. The bakehouses, slaughter-houses, dairies and cowsheds are stated to have been kept in good condition.

Sanitary Requirements.

- 1. The abolition of the insanitary middenprivies should be proceeded with as rapidly as possible.
- 2. An isolation hospital sufficient to meet the requirements of the district.

HETTON-LE-HOLE.*

J. Adamson, M.D., Medical Officer of Health.

Area in Acres, 1,618. Estimated Population, 1895, 12,726.

Birth-rate.

Death-rate.

Zymotic death-rate.

Infant Mortality-rate.

41.4

21.6

3.06

193.

Phthisis death-rate, 1:33; Respiratory diseases death-rate, 2.59. The general, zymotic, and infantile death-rates are all very high.

Infectious Diseases.

Enteric fever was the only disease at all seriously prevalent, 43 cases being notified, with 7 deaths. The most probable cause of its prevalence was the emanations from the untrapped openings of the surface water drains, which many of the inhabitants used as sewers, although a proper system of pipe sewers has been laid down with drain connections to each house.

General Sanitation.

House-to-house inspections have been made by the Urban District Council on several occasions, and notices were subsequently served to remedy the defects that were observed. At the Brickgarth, very great improvements have been effected during the year, the majority of the houses having been provided with proper yards, drainage, and privy accommodation. At Easington Lane and in other parts of the district

^{*} Hetton-le-Hole was formerly part of the Houghton rural district, but in April, 1895, it was formed into an urban district. The medical officer of health was not appointed till July last, and his report only deals with the vital statistics of the district from that time, but the statistics in this summary relating to Hetton-le-Hole are for the whole of 1895, and have been compiled by the county medical officer from the district registrar's returns.

similar improvements are in progress, but up to the end of the year there were still many houses in the Cross Rows, Hetton, either with no sanitary conveniences or with very defective privy accommodation. Several houses were reported by the medical officer of health as unfit for habitation, and in each case the District Council took action and served the necessary notices. Referring to the two common lodging-houses, Dr. Adamson thinks that "both are licensed beyond "their healthy and sanitary accommodation." The slaughter-houses are stated to be fairly satisfactory, but more care is required in the scrupulous and careful removal of the offal. The report advises that the milk trade should be strictly supervised, and that all dairymen and milk sellers should be licensed.

Sanitary Requirements.

- I. All openings into the surface water drains which are near to dwelling-houses should be properly trapped, and notices should also be distributed to the tenants to dispose of their slops, &c., down the proper drains.
- 2. The District Council should insist on all dairy men and milk sellers being registered.

HOUGHTON-LE-SPRING.

D. S. PARK, F.R.C.S., Medical Officer of Health.

Area in Acres, 1,551. Estimated Population, 1895, 6,670.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

39'4 23'2 3'I 20I

Phthisis death-rate, 1.0; Respiratory diseases death-rate, 4.0. All the above mortality-rates are

considerably higher than in 1894, notably the total death-rate and infant mortality rate. During the 1st and 3rd quarters of the year the death-rate was extremely high, in the first quarter being equal to a rate of 30.4 per 1,000 per annum, the result of the prevalence of whooping cough and lung diseases, while in the 3rd quarter the rate was equal to 31.9 per 1,000 population, the high mortality in this quarter principally resulting from the prevalence of infantile diarrhæa.

Infectious Diseases.

There were 94 cases notified, the most prevalent diseases being typhoid fever (45 cases), and scarlet fever (39 cases). The latter disease was of a very mild type, and did not cause a single death. With regard to the cause of the typhoid fever cases, nearly all those in the first eight months of the year were found to be associated with sanitary defects, but from September to the end of the year when the disease was most prevalent, no noteworthy insanitary conditions were found to exist in connection with the majority of the cases. There was no evidence that either the water or milk supplies were in any way accountable for the prevalence of enteric fever, and Dr. Park thinks "that the proper ventilation of our sewers "has had a not inconsiderable share in the recent out-"break of the disease." Of the 45 cases of enteric fever, 32 were males, and the great majority of these were coal miners. In nearly all the cases of enteric fever there was an entire absence of diarrhœa, the most prominent symptoms being persistent headache and colicky abdominal pain. Diarrhæa was very prevalent during August and September, and caused 7 deaths among young children. Improper feeding of infants, together with offensive smells arising from drains and ashpit-privies are referred to as more or less direct causes of the disease. The district is still without an isolation hospital, but a site was chosen for a hospital which, however, the Local Government Board refused to sanction, owing to its proximity to the boundary fence of the land proposed to be purchased. Negotiations are now in progress for the purchase of another site.

General Sanitation.

Two samples of the town's water supply sent to the County Analyst were commented on unfavourably by him, though subsequent samples sent to other analysts were reported to be free from pollution. Park however says that "our water is undoubtedly "subject to intermittent pollution." During the year a number of back streets and footpaths have been paved, and a great improvement thereby effected. The ventilation of the sewers is not satisfactory, and the report recommends that ventilating shafts be placed in all the back streets in place of the existing openings on the surface, which are often offensive. Other improvements effected during the year include the repair of insanitary ashpit-privies, the substitution of smaller receptacles in some streets for old middens, and better drainage. The Public Health Acts Amendment Act, 1890, and the Infectious Diseases Prevention

Act, 1890, have both been adopted by the District Council.

Sanitary Requirements.

- I. Improvements in the ventilation of the sewers as suggested in the report.
- 2. Careful attention should be paid to the quality of the drinking water, and frequent analysis of it should be made.

The report is **not** printed.

LEADGATE.

GEORGE RENTON, M.D., Medical Officer of Health.

Area in Acres, 1,838. Estimated Population, 1895, 4,660.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

39.9 19.9 2.7 177

Phthisis death-rate, 0.6; Respiratory diseases death-rate, 2.5. The total death-rate was the highest in the district since 1891, but while for the first half of the year it equalled only 15.0 per 1,000, for the latter half it was equal to a rate of 24.0 per 1,000 population. The zymotic death-rate and infant mortality-rate were also much above the average.

Infectious Diseases.

The number of cases notified (269) was very large considering the small population of the district, but only two diseases were at all prevalent, namely enteric fever and scarlet fever. The former disease was very seriously epidemic during September and October. For the first eight months of the year only 11 cases of enteric fever were reported, but in September there were 101 cases, and in October 57.

As to the cause of the epidemic, which was very general throughout the whole of the town of Leadgate, and not confined to any particular district, Dr. Renton points out that while the water supply was certainly not polluted at its source, there were special circumstances connected with the distribution of the supply to the town of Leadgate which rendered it more than possible that it may have become locally contaminated by lateral insuction into the water pipes of specifically infected matter from contiguous sewers, &c., and he adds, "From the fact that the outlying portions of the "district, where the water used for drinking purposes "was other than that provided by the water company, "and where only one case of this fever occurred, I am "disposed to take the view that the water supply was "one of the factors of the diffusion of enteric fever in "your district." The milk supply may also in some degree have assisted in the diffusion of the disease, as cases of the fever existed in some of the houses from which milk was retailed. Emanations from the sewers through house drains, the water from the traps of which had evaporated owing to the hot weather, and from the numerous large midden-privies, were in some measure responsible for the spread of the epidemic. Fortunately the case mortality was low, which is attributed to the good nursing the patients enjoyed owing to the employment of a trained nurse by the District Council. the patients were removed to the isolation hospital for treatment, and other precautionary measures were adopted.

There were 57 cases of scarlet fever, but the disease was of a mild type, and only caused one death.

Dr. Renton states that the Notification Act would be more effectual if cases were notified to him at once, and that in many instances cases did not come to his knowledge till the fever had subsided.

General Sanitation.

It is pointed out that the new houses in the district are not altogether satisfactory in that their sites are not impervious to ground air and moisture. A number of the older houses have been improved by the addition of back kitchens. The insanitary condition of the old ashpit-privies in the district is again commented upon, and those more newly erected, though covered over and further from the dwellings, are stated to be too large. The cleansing of the ashpits is stated to have been better performed, but "as I have "repeatedly asseverated, this latter will never be "effectual until undertaken by your Authority."

Sanitary Requirements.

- rendered impervious to ground air and moisture.
- 2. The District Council should not permit the erection of any more ashpit-privies, and the sanitary defects of those already existing should as far as possible be removed.
- 3. The District Council should undertake or contract for the cleansing of ashpits, &c., and the removal of house refuse.
 - 4. New building and sanitary bye-laws.

RYTON.

PHILIP Brown, M.D., Medical Officer of Health.

Area in Acres, 5,150. Estimated Population, 1895, 6,500.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

35.07 11.8 2.0 109

Phthisis death-rate, 0'32; Respiratory diseases death-rate, 1'53. The birth-rate shows a considerable increase and the zymotic death-rate is also somewhat higher. The general death-rate and infant mortality-rate are, however, both lower, and are very satisfactory.

Infectious Diseases.

Of the 52 cases notified 26 were diphtheria, 13 enteric fever, and 12 scarlet fever. Of the diphtheria cases 24 were notified within three weeks from Stargate. If the cases were diphtheria at all, the disease was of a very mild type, as only one death resulted, but as a precautionary measure the school was closed. The drains and drain traps of the pit houses from which the cases were notified were found to be in a very defective condition, and steps are now being taken to make them sanitary. It is stated that there were no special faults noticeable in the sanitary surroundings of the houses where the cases of enteric fever occurred. There were 6 deaths from diarrhæa, which was very prevalent during September. Houses in which infectious disease occurred were disinfected.

General Sanitation.

The water supply is stated to have been plentiful and of good quality during the year. One house was closed as being unfit for habitation. A new sewerage system has been completed at Crawcrook,

and the sewers have been extended at Hedgefield and in other parts of the district. It is stated that more effectual means are being provided for the ventilation and flushing of the sewers at Stargate, and a scheme is under consideration by the District Council for the disposal of the sewage of that place "in order to do "away with the old nuisance at the ponds into which "the sewage flows." Dr. Brown points out that many of the provisions of the bye-laws in force in the district, which date from 1866, are antiquated, and states that the adoption of the model bye-laws of the Local Government Board would be attended with great advantages. 90 informal and 38 statutory notices have been served for the abatement of nuisances, and among other improvements effected as a result of the notices may be mentioned the erection of five automatic flushing water-closets.

Sanitary Requirements.

- 1. New sanitary and building bye-laws.
- 2. The District Council should insist that all private streets should be properly made and metalled.

SEAHAM HARBOUR URBAN DISTRICT.

L. GERALD DILLON, M.B., Medical Officer of Health.

Area in Acres, 1,089. Estimated Population, 1895, 9,680.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

42'I 21'7 4'O 183

Phthisis death-rate, 1.6; Respiratory diseases death-rate, 4.1. The general and zymotic death-rates were again very high, though the former is the lowest during any of the last five years.

Infectious Diseases.

Scarlet fever was very prevalent during the first half of the year, and of the 114 cases notified, 77 were of that disease. 20 cases of typhoid fever were reported, nearly all of them in the latter half of the year, but the medical officer of health was unable to trace the disease to any definite source. Only two cases of diphtheria were reported, and they both proved fatal. The new fever hospital was completed during the year, but advantage does not seem to have been taken of the isolation it affords, as only one case was received into it during the whole year. Diarrhæa was very fatal, causing 21 deaths.

General Sanitation.

The ashpits are stated to have been regularly emptied by the employees of the District Council. The small ashclosets that have been erected in the town in lieu of the ashpit-privy system, and which are provided with a proper hatch for cleansing have been found to work most satisfactorily. The water supply was satisfactory both as to quality and quantity, and the dairies and common lodging-houses are reported to have been regularly inspected.

Sanitary Requirements.

None referred to, but the causes of the continued high general and zymotic death-rates in the town require the careful attention of the District Council, especially as from its natural position the district should be a healthy one. The town is without proper building or sanitary bye-laws, and seeing that the two

filth diseases, enteric fever and diarrhœa, have for some years caused a high mortality, it is more than possible that the midden-privy system of excrement disposal which obtains in the district is the chief cause of this unsatisfactory state of things.

SHILDON AND EAST THICKLEY.

S. FIELDEN, M.D., Medical Officer of Health.

Area in Acres, 1,066. Estimated Population, 9,986.

Birth-rate. Death-rate. Zymotic Death-rate. Infant Mortality-rate.

39°3 19°5 3°1 195

Phthisis death-rate, I'I; Respiratory diseases, 2'5. The general, zymotic, and infant death-rates are all high and much above those of last year. Dr. Fielden states that the high infant mortality is due to a variety of causes, such as improper feeding, maternal ignorance, and neglect and want of cleanliness, and says:—"I am "fully persuaded that these would be very materially "lessened and our educational system at the same "time vastly improved, if during the last year or two of "every school girl's life she were taught the ABC of "hygiene and drilled in the art of making attractive "and comfortable homes for our working men."

Infectious Diseases.

Only 69 cases were notified during the year, and 39 of these were cases of enteric fever, and referring to this disease Dr. Fielden says:—" Uncovered ashpits 'and defective drainage into which imperfectly disinfected excreta have been thrown, were the most "probable causes of the disease. We found the "galvanised air-tight pails of great value." Measles was very prevalent causing 11 deaths, and the report

points out that of late years this disease has been prevalent in Shildon every other year, a peculiarity that has been observed in other districts. The high temperature of the summer, and insanitary conditions are referred to as the probable causes of the prevalence of diarrhæa, which caused 13 deaths.

General Sanitation.

of formal and 163 informal notices were served for the abatement of nuisances, and the improvements effected during the year include the making of streets, relaying of sewers, improvements in the drainage and spouting of houses, and the reconstruction of insanitary ashpit-privies. Two houses were closed as unfit for habitation. A great improvement is stated to have been effected in the scavenging of the district, though the difficulty with respect to tips continues. The slaughter-houses have, when inspected, generally been found in a satisfactory state.

Sanitary Requirements.

None referred to, but the uncovered ashpits and defective drainage, which are mentioned as probable causes of enteric fever, should be dealt with by the District Council.

SOUTHWICK.

JAMES STOBO, L.R.C.P., Medical Officer of Health.

Area in Acres, 845. Estimated Population, 1895, 11,295.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate. 39.6 18.6 2.83 178

Phthisis death-rate, 1.77; Respiratory diseases death-rate, 3.09. The general and zymotic death-rates and infant mortality-rate are all considerably lower than in 1894, and compare favourably with the similar

rates in previous years, and Dr. Stobo thinks this improvement has largely resulted from the better sanitary condition of the town.

Infectious Diseases.

The Infectious Diseases (Notification) Act has not been adopted by the District Council, and there is therefore no accurate record of the cases of infectious disease occurring in the town, but, taking the mortality as a criterion, none of the infectious diseases except diarrhœa appear to have been prevalent. Of the 32 zymotic deaths no fewer than 25 resulted from diarrhœa, and Dr. Stobo thinks that this disease should not be classified among zymotic diseases as frequently it is not of specific origin, but only a symtom of some other constitutional disorder such as tuberculosis. Enteric fever only caused three deaths as compared with 12, 10, and 7 deaths in the three previous years, and seeing that it was so epidemic in the adjoining town of Sunderland during the summer, Dr. Stobo thinks the comparatively low death-rate very satisfactory. The isolation hospital is stated to have been very useful during the year, and 15 cases were removed The report recommends that the District Council should issue printed leaflets with instructions as to the precautions to be adopted when patients suffering from infectious diseases are treated in their own houses.

General Sanitation.

As a result of an inspection of the district by the medical officer of health and inspector of nuisances, and by the end of the year they had mostly received attention. The notices had mostly reference to the putting right of defective ashpits by rendering them water tight, &c., and to the improvement of the surface drainage of the yards of dwelling-houses.

Sanitary Requirements.

- 1. The adoption of the Infectious Diseases (Notification) Act.
- 2. The carrying out of the recommendation of the medical officer of health as to infectious diseases.

SPENNYMOOR.

J. C. O'Hanlon, L.R.C.S.I., Medical Officer of Health.

Area in Acres, 3,385. Estimated Population, 1895, 16,300.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

40'2 22'5 2'57 234

Phthisis death-rate, 0.92; Respiratory diseases death-rate, 5.03. The general death-rate and infant mortality-rate were both very high, and compare unfavourably with similar rates for 1894. No reference is made in the report to the causes of the increased mortality-rates.

Infectious Diseases.

Judging by the number of notified cases, erysipelas, diphtheria, scarlet fever, and enteric fever, were all rather prevalent during the year. Enteric fever was responsible for 11 deaths, but the causes of the prevalence of this and the other zymotic diseases in Spennymoor are not discussed in the report, nor is

any reference made to the precautionary measures that were adopted to prevent their spread. The district is still unprovided with an isolation hospital.

General Sanitation.

Considerable improvements have been effected in the main sewers of Tudhoe Grange and Low Spennymoor, and 80 cesspools on their course have been filled in and manholes substituted. The sewers in the district are stated to have been periodically flushed, and several of them have been relaid. The sewage disposal works for the Spennymoor Ward (7,000 population) are stated to be inadequate to deal with the whole of the sewage, but "the Council have "already taken the matter in hand, and very shortly "the works will be enlarged." A scheme is being prepared for the disposal of the sewage from Tudhoe Grange, Low Spennymoor, Tudhoe Village, and Tudhoe Colliery.

The slaughter-houses are all licensed, and with 4 exceptions the floors have been relaid in cement. Work is in hand for the improvement of many of the cowsheds in the district, and in some cases where the premises and their surroundings have been very bad the owners have been prohibited from keeping cows. The drains of the market have been put into a proper condition and disconnected from the sewer. A house-to-house inspection was made during the year by the medical officer of health, and the defects discovered are stated to have been remedied. 564 nuisances were abated as a result of notices served.

Sanitary Requirements.

- An isolation hospital and steam disinfecting apparatus.
- 2. The proper disposal of the sewage of the district and the removal of the defects of sewerage which still exist.

STANHOPE.

JOHN GRAY, M.B., Medical Officer of Health.

Area in Acres, 211. Estimated Population, 1895, 1,900.
Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.
30.5 22.6 3.15 137

Phthisis death-rate, 4'21; Respiratory diseases death-rate, 3'15. The general death-rate is very high and much in excess of the average for the town. The zymotic death-rate, though lower than in 1894, is also unsatisfactory. The high general death-rate is attributable to the large number of deaths from phthisis and from zymotic and lung diseases.

Infectious Diseases.

The Infectious Diseases Notification Act is not in force in the district. Five cases of enteric fever (2 of them fatal) are known to have occurred, two of which were imported into the district, two probably contracted the infection from previous cases, and the remaining case was probably caused by insanitary surroundings which have since been removed. Diarrhæa was prevalent in September and caused 2 deaths. Measles was epidemic during the last quarter of the year, and to such an extent in December that it was necessary to close the elementary schools. 2 deaths resulted from the disease.

General Sanitation.

The water supply was good and plentiful during the year. The chief sanitary improvements effected were the replacement of the old stone sewers in Emma Street, Union Street, and part of Edward Street by properly ventilated sanitary pipe sewers. The old stone drains of 16 houses have also been similarly dealt with. Two ashpit-privies have been replaced by water-closets and dust-bins. As a result of three systematic house-to-house inspections by the medical officer of health and inspector, 43 notices were served for the abatement of nuisances, but only 24 of these have received attention. Referring to excrement disposal, Dr. Gray says:- "As a result of house-to-"house inspections any nuisance in connection with "the old ashpit and privy arrangements in the district "have been reported to your authority, and notices "served, but with little or no result." Referring to scavenging and refuse disposal, he says:--"There is "still the same difficulty in having middens regularly "cleansed out. Scavenging ought to be undertaken "by the authority."

Sanitary Requirements.

The following are specially referred to in the report:—

- Board's model bye-laws for the regulation of nuisances, common lodging-houses, new streets and buildings, and slaughter-houses.
- 2. Means of isolation and a disinfecting apparatus.

- 3. The adoption of the Infectious Diseases (Notification) Act. "I believe Stanhope and South-"wick have the unenviable distinction of being the "only two Urban District Councils who have not seen "fit to protect themselves by this Act."
- 4. Registration and regulation of dairies and cowsheds.

The report is **not** printed.

STANLEY.

T. Benson, M.D., Medical Officer of Health.

Area in Acres, 2,006. Estimated Population, 1895, 10,400.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

35'9

20'6

2'30

24 I

Phthisis death-rate, 1.53; Respiratory diseases death-rate, 2.98. The above mortality statistics compare very unfavourably with those for 1894. The causes of the unusually high infant mortality are not specially mentioned in the report. The estimate of the population (1,100 more than last year) appears to be very high.

Infectious Diseases.

The cases notified numbered 101, as against 30 in the previous year. The most prevalent disease was scarlet fever (77 cases), nearly all the cases occurring in the second half of the year. There was no death from typhoid fever, and the cause of most of the 14 cases notified could not be traced. Diarrhæa was unusually prevalent, causing 9 deaths, while 5 deaths were attributed to measles and 3 to erysipelas. Two cases were removed to the Leadgate isolation hospital.

General Sanitation.

new houses erected during the year numbered 110, and in addition 24 houses which had been closed as insanitary have been practically rebuilt. Six houses were closed as unfit for habitation, and 10 others will be closed as soon as accommodation can be provided for the tenants. 354 houses have been spouted, and a large number of small defects and nuisances remedied. A number of old ashpit-privies have been either replaced by more sanitary out-offices or repaired. A main sewer has now been laid to the Barracks, Quaking Houses, and High Rows, South Moor, and the whole of the sewage of the South Moor district is now conveyed to the outfall works, which "ought to be extended as speedily as possible, as in "their present condition unpurified sewage passes "through and pollutes the adjoining stream." Dr. Benson recommends that no repairs to a house should be considered complete unless the rooms are ceiled, and that "whenever any of the old privy-middens need "repairing no patching up should be allowed, but "thorough reconstruction enforced." The removal of refuse, though stated to have been fairly well attended to, "would be better and more systematically carried "out if placed under the direct control of your Council." No further action has been taken regarding the scheme of sewage disposal for the greater part of the district.

Sanitary Requirements.

1. The extension of the sewage disposal works at South Moor, as the sewage at present pollutes

a stream, the water of which is used for drinking purposes at Chester-le-Street.

- 2. The abolition of the insanitary middenprivies which exist in the district.
- 3. The District Council should themselves undertake the cleansing of the ashpits and the removal of house refuse.

TOW LAW.

James Wild, L.R.C.P., Medical Officer of Health.

Area in Acres, 470. Estimated Population, 1895, 4,554.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

38.2 20.8 I.97 224

Phthisis death-rate, 0.87; Respiratory diseases death-rate, 3.95. The general death-rate was rather high and very much above the rate for 1894.

Infectious Diseases.

No epidemic of a serious nature is stated to have occurred with the exception of measles, which was prevalent from April to July. "There have been a "few cases of diphtheria, but a marked diminution as "compared with last year." The disinfection of the elementary schools during holiday time is again recommended. The report points out that the district is without any provision for the isolation of infectious cases, and recommends that a disinfecting apparatus should be provided.

General Sanitation.

"The sanitary condition of the town may be "reported as fair," but judging by the very large number of sanitary defects mentioned in the report,

such as insanitary ashpit-privies and drainage, defective spouting and yard paving, and improper scavenging, there is very great need of sanitary improvement. Many of the defects to which reference is made were mentioned in the report of the medical officer of health for 1894, and the District Council should insist on them being remedied without any further delay. Dr. Wild points out that "in all cases of rebuilding the ashpits "should be covered, and the bottom and a certain "distance up of the walls inside ought to be cemented." New bye-laws appear to be necessary for the district.

Sanitary Requirements.

- 1. An isolation hospital and disinfecting apparatus.
- 2. The removal of the many serious sanitary defects mentioned in the report, many of which are of long standing.

The report is **not** printed.

WHICKHAM.

A. W. Attwater, L.R.C.P., Medical Officer of Health.

Area in Acres, 5,961. Estimated Population, 1895, 9,740.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

38.6 17.5 2.05 162

Phthisis death-rate, 1.43; Respiratory diseases death-rate, 2.36. The above mortality-rates, while not very high, compare unfavourably with the low rates of the previous year. The comparatively high infant mortality-rate is attributed to the large number of deaths from diarrhæa (10).

Infectious Diseases.

The only cases notified were 20 of scarlet fever, 17 of enteric fever, 9 of erysipelas, and 1 of continued fever. The scarlet fever cases were of a mild type and caused no deaths. The majority of the cases of enteric fever occurred at the West end of Swalwell, and "were of a mild type and call for no "comment." The only death from the disease was that of a child at Marley Hill. Measles was prevalent at the beginning of the year (2 deaths), and diarrhœa in June, July and August among infants. "The "isolation hospital is still in abeyance although very "much needed."

General Sanitation.

The water supply of the district has been good and abundant. Two houses at Dunston were closed as being unfit for habitation. Ten new cottages were erected during the year at the west end of Whickham. "The ashpits are now cleaned by your own men, a "more satisfactory arrangement than letting by con"tract. The annual survey took place as usual, when "all sanitary and other defects were brought to your "notice." There were no prosecutions for the exposure of unsound meat or fruit.

Sanitary Requirements.

An isolation hospital and disinfecting apparatus.

WILLINGTON.

R. E. Brown, L.R.C.P., Medical Officer of Health.

Area in Acres, 3,795. Estimated Population, 1895, 8,055.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

40.2 19.2 2.30 225

Phthisis death-rate, 0.60; Respiratory diseases death-rate, 4.5. The zymotic death-rate is very slightly lower than in 1894, but the general death-rate and infant mortality rates compare very unfavourably with those of the previous year.

Infectious Diseases.

Scarlet fever was the only prevalent disease, and 79 of the 100 cases notified were of that disease. The notified cases of enteric fever numbered 8, of which 7 were in the Willington township. Four cases of diphtheria were reported. Both diarrhæa (7 deaths) and whooping cough (7 deaths) caused a high mortality. Reference is made in the report to the benefits resulting from the notification of infectious disease. Although the district is still without an isolation hospital, arrangements are being made jointly with the Shildon urban and Auckland rural districts for the erection of a hospital near Job's Hill. It is satisfactory to note that all the children born during the year that have survived have been vaccinated.

General Sanitation.

A scheme has been prepared by the surveyor for the prevention of the pollution of the neighbouring watercourses by the sewage of the district. The report again recommends that the scavenging and cleansing of ashpits should be undertaken by the

District Council. There are still some back-to-back houses at Willington and Page Bank. "Spouting "generally is in a fairly good condition, and both at "Brancepeth and Page Bank several streets have "received attention." All the house drains in the district are believed to be now properly trapped. The sanitary improvements effected during the year include the channelling and paving of Chapel Street, Willington, the enlargement of 33 houses at Oakenshaw and the laying down of new channelling for them, and the paving and channelling to 12 houses in Park Street. The 12 registered slaughter-houses and the cowsheds are said to have been kept in good condition, though some of the latter are badly lighted. The two common lodging-houses have been kept in good condition. 87 informal and 7 formal notices have been served for the abatement of nuisances. The district was systematically inspected by the sanitary officers.

Sanitary Requirements.

The following recommendations are made:-

- I. That a portion of the roadway at Page Bank, near to the river side, be fenced off for the protection of the public, the place being a most dangerous one.
- 2. That the District Council should undertake the scavenging of the district and the removal of excrement and house refuse, so as to secure systematic cleansing at regular intervals.
 - 3. That all unpaved yards should be paved.
- 4. That a public urinal be erected in a central position.

RURAL DISTRICTS.

AUCKLAND RURAL DISTRICT.

(No. 1 Division).

T. A. McCullagh, M.R.C.S., Medical Officer of Health.

Area in Acres, 18,005.

Estimated Population, 1895, 28,210.

Birth-rate.

Death-rate.

Zymotic death-rate. Infant Mortality-rate.

34.6

17.4

Phthisis death-rate, 1.09; Respiratory diseases death-rate, 2'26. The general death-rate, though slightly higher than in 1894, is fairly satisfactory, but the zymotic death-rate and infant mortality-rates show a considerable increase. The increase in the zymoticrate resulted from the epidemic prevalence of measles in Coundon, Coundon Grange, and St. Andrew's, Auckland.

Infectious Diseases.

The Infectious Diseases (Notification) Act was adopted during the year, and during the last six months 325 cases were notified. Of the scarlet fever cases (208), the greater number occurred at Byers Green, Binchester, and Old Park, where the disease was epidemic during the last quarter. Dr. McCullagh recommended the closure of the schools, and as soon as this was done the epidemic began to rapidly subside. Only isolated cases of diphtheria were reported, and there were no deaths. Typhoid fever was most prevalent in Eldon Lane, Coundon, and Coundon Grange, and during the last half of the year 31 cases were notified

from these townships. In some of the cases structural defects were discovered and remedied, but "I believe "the disease is very largely spread by means of the "privy-ashpits where undisinfected or partially disin-"fected excreta of patients suffering from the fever are "deposited."

General Sanitation.

After due enquiry on the spot by one of their medical inspectors, the Local Government Board made an order requiring the District Council to undertake or contract for the scavenging and emptying of ashpits and privies, &c., in several of the populous townships. Dr. McCullagh says: -- "This is a most important step "towards an improved sanitary condition of the "villages, especially in connection with houses which "do not belong to a colliery." The sewage disposal works at Coundon have been enlarged, and the condition of the Coundon Beck is now much improved. Sewage disposal works have been constructed at Station Houses, South Church, and at Seldom Seen, but at the end of the year the scheme for the removal of the sewage of the Escomb and Witton Park districts from the river was still under consideration. The sanitary improvements effected during the year include the making of the roads at Eldon Lane, Close House, and the Brickyard; the improvement in the drainage and sewerage of Jackson Street, Brickyard; and the ventilation by shafts of other sewers in the Brickyard. At Adamson Houses, South Church, and elsewhere in the district, improvements have been effected as a result of action taken under the Housing of the Working Classes Act, 1890.

Sanitary Requirements.

None specially referred to but the pollution of the river Wear by sewage, especially above Bishop Auckland, and should not be permitted seeing that the water supply to that town is still unfortunately obtained from the river.

AUCKLAND RURAL DISTRICT.

(No. 2 Division).

GEO. W. Ellis, L.R.C.P., Medical Officer of Health.

Area in Acres, 43,393. Estimated Population, 1895, 36,490.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

36'I 16'7 2'08 I70

Phthisis death-rate, 1.04; Respiratory diseases death-rate, 2.30. The above mortality-rates are all slightly lower than in 1894, and, excepting the infant mortality-rate, which is rather high, are satisfactory. The highest death-rate was in the Hunwick township (26.2), and the lowest in the South Bedburn township (6.6).

Infectious Diseases.

The Infectious Diseases (Notification) Act was adopted during the year and came into force on July 1st, from which time to the end of the year 234 cases were reported. Scarlet fever was prevalent throughout the district (157 cases) and caused 12 deaths. Two deaths from diphtheria at Softley were traceable to the surface water supply, and the one at Hunwick to defective scavenging. Enteric fever was rather preva-

lent in the Crook district, and during the year 9 deaths occurred from this disease in the whole district. Only the causes of the cases that ended fatally are referred to and are attributed to either defective drainage and scavenging or the drinking of impure water. The number of deaths in the district from diarrhæa was 20, and of these 9 occurred in the Helmington Row township. Whooping cough caused 15 deaths, most of which occurred in the parishes of Helmington Row (7) and Crook (6). The report states that the District Council have decided to provide two isolation hospitals for the district, one near Crook and the other near Bishop Auckland.

General Sanitation.

Plans have been prepared for providing the township of Lynesack and Softley with a proper water supply which is greatly needed. A better supply to the Hutts, Crake Side, is stated to be specially needed, "and I hope it will be found practicable to include "these houses in the scheme." A loan of £2,000 has been obtained for providing Toft Hill and Land's Bank with a good water supply, and Dr. Ellis points out the desirability of also supplying Low Lands by the same scheme, as the only water supply is from a surface well. At Fir Tree a better supply of water is still needed, and the report recommends that water should be obtained from the Waskerley mains, which are in the vicinity. It is recommended that all water obtained from surface wells should be periodically analysed. Considerable improvements have been effected in the

sewerage and drainage of many parts of the district, notably at Fir Tree, Sunniside, Woolley Terrace, and High Wheatbottom. The sewerage of the back streets at Crook is much needed; many of the sewers here are stated to be of segment tiles, and the branch drains also of defective construction. Plans have been prepared for disposing of the sewage of Sunnybrow and Witton-le-Wear villages which at present pollutes the river Wear. Similar disposal works are stated to be needed for West Auckland, and for Hamsterley where the present outfall is very offensive in hot weather. More ashpit and privy accommodation is needed at The Oaks, Evenwood. The police station at Crook is stated to be in an insanitary state. A number of houses in the district have been dealt with under the Housing of the Working Classes Act. The dairies, cowsheds, common lodging-houses, and the Crook market have been inspected from time to time and generally found satisfactory, except that more ventilation is required in the lodging-houses. As a result of an order issued by the Local Government Board, the District Council undertake the cleansing of ashpits, &c., and the removal of house refuse in the more populous townships in the district, with the exception of Hunwick and Helmington, which Dr. Ellis recommends should also be scavenged by the District Council.

Sanitary Requirements.

1. An improved water supply to Fir Tree, Low Lands, and The Hutts, Crake Side.

- 2. The proper sewerage and drainage of Crook village.
- 3. The proper disposal of the sewage of Witton-le-Wear, Hamsterley, West Auckland, &c.
- 4. The provision of further out-door conveniences at the Oaks, Evenwood.

BARNARD CASTLE RURAL DISTRICT (Barnard Castle Division).

Alfred H. Sevier, M.B., Medical Officer of Health.

Area in Acres, 13,636. Estimated Population, 1895, 1,004.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

22'9 14'9 Nil 87

Phthisis death-rate, 2.0; Respiratory diseases death-rate, 2.0. Of the 15 deaths occurring during the year 8 were those of persons over 65 years of age. There were no deaths from infectious diseases, only a few cases of whooping cough occurring in the village of Whorlton.

General Sanitation.

"The sanitary condition of the district has been supervised in the usual thorough manner. No "complaints were made to me." The cowsheds, dairies, &c., are stated to have been regularly inspected, and to have been found in good condition.

No reference is made in the report to the water supply, drainage, or the condition of the dwelling-houses in the district.

BARNARD CASTLE RURAL DISTRICT (Middleton Division).

J. Atkinson, L.R.C.P., Medical Officer of Health.

Area in Acres, 40,897. Estimated Population, 1895, 3,804.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

27.6 15.5 1.3 171

Phthisis death-rate, 1'0; Respiratory diseases death-rate, 1'3. The death-rate was slightly higher than last year, and the infant mortality-rate was again very high. The general death-rate of Middleton was again excessive (21'4). The situation of Middleton is naturally healthy, and there must be some special cause or causes to account for the high mortality in the village, which should receive the serious attention of the District Council.

Infectious Diseases.

The Notification Act was adopted in the district towards the end of the year. Several cases of influenza occurred in the first quarter; in the third quarter there were 2 cases of scarlet fever at Eggleston, 2 cases of enteric fever at Middleton (caused by the insanitary condition of the house in which they occurred), and one case of enteric fever at Ettersgill (attributed to an insanitary drain near the house); in the fourth quarter whooping cough was prevalent in many of the townships, and caused 2 deaths at Middleton.

General Sanitation.

A new system of sewerage and drainage is being laid down for the village of Middleton, and sewage disposal works will also be provided, by which

all sewage matter from the village will be kept out of the Tees. No further action has yet been taken with respect to the drainage of Eggleston, but plans are now ready for the complete drainage of the village, and the sewage will then be kept out of the Tees. The drainage of the village of Newbiggin has been improved. The mineshops in the district are stated to be now in a satisfactory state. The remarks of Dr. Atkinson on the dairies and cowsheds of the district require attention, for he says :--" The farm houses are "getting gradually put into a more sanitary condition, "but the want of light, ventilation, and drainage in "many of the cowbyres is still much needed. The "liquid manure from some cowbyres in the district is "allowed to drain on to the side of the public road, "which is a thing your Board should not, I consider, " allow."

Sanitary Requirements.

- The District Council should insist on the proper lighting, ventilation, and drainage of the cowbyres throughout their district.
- The drainage of Eggleston village should be completed.

BARNARD CASTLE RURAL DISTRICT (Staindrop Division).

JAMES BEATTIE, L.R.C.P., Medical Officer of Health.

Area in Acres, 25,494.

Estimated Population, 1895, 6,300.

Birth-rate. Death-rate.

Zymotic death-rate. Infant Mortality-rate.

24.4 13.3

0'3I

161

Phthisis death-rate, 0.47; Respiratory diseases

death-rate, 2.53. The birth-rate was very low, while the general and zymotic death-rates almost equalled the extremely low rates of the previous year. The infant mortality-rate was, however, rather high. The phthisis death-rate was again very low. The highest death-rate was in the Staindrop township (17.0 per 1,000), and the lowest in Winston (9.6) and Gainford (11.5).

Infectious Diseases.

The Notification Act was adopted in December. The only deaths from zymotic diseases were I from scarlet fever at Staindrop, and I from enteric fever at Cockfield, and only a few isolated cases of these diseases came to the knowledge of the medical officer of health during the year.

General Sanitation.

A new sewer has been laid at the Brick Flatts, Woodland, but the ashpit-privies are still insanitary owing to their objectionable position. The houses at Dale Terrace are still without any connection with the water supply main. At Cockfield there are two houses without any conveniences, and one of these which has been reported to the District Council as insanitary and injurious to health is still occupied. Throughout the district there is stated to have been a marked improvement in sanitary matters, though the want of proper spouting in some instances tends to cause the houses to be damp. Dr. Beattie concludes his report with the following words:—"I would again strongly advise you "to adopt sanitary and building bye-laws, including "the registration of slaughter-houses."

Sanitary Requirements.

- I. Proper isolation hospital accommodation for the district.
- 2. The removal of the ashpit-privies at Brick Flatts to a more suitable position, and the connection of the houses at Dale Terrace with the water supply pipes.
- 3. The adoption of new sanitary and building bye-laws.

CHESTER-LE-STREET RURAL DISTRICT.

JOHN TAYLOR, M.D., D.P.H., Medical Officer of Health.

Area in Acres, 34,869. Estimated Population, 1895, 55,750.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

40'7 19'7 2'27** 183**

Phthisis death-rate, 0'96*; Respiratory diseases death-rate, 3'71*. The birth-rate is higher, but the general death-rate 0'4 per 1,000 lower than in 1894. Dr. Taylor was only appointed medical officer of health for the district in July, and his annual report, for the most part, only deals with the public health of the district from that time. The infant mortality-rate was very high.

Infectious Diseases.

Scarlet fever was very prevalent, there being 326 cases and 14 deaths, between July and the end of the year. The disease was most prevalent at Allerdean, Pelton Fell, and Edmondsley, its spread being

^{*} Calculated from returns made to the county medical officer by the district registrars.

greatly facilitated by the carelessness of the parents. It was not considered necessary to close the schools, but in each case the schoolmaster was informed of the presence of infectious disease, and advised not to permit the return to school of a member of an infected household, unless he was provided with a certificate from a medical practitioner that the house was free from infection. There were 8 deaths among the 72 cases of enteric fever reported to Dr. Taylor, and he points out that it is often dangerous to remove typhoid patients any distance to an isolation hospital. Referring to puerperal fever, Dr. Taylor says :-- "Without "doubt sewer gas and other septic products of sewers "are potent factors in producing septic disturbances "after confinements." Diarrhœa was very fatal during the summer and autumn. It is rightly pointed out that deaths among infants from enteritis, gastroenteritis, &c., should during the hot months be classed under the head of diarrhœa. The isolation hospital was used for the treatment of a large number of cases of infectious disease, and was evidently very useful.

General Sanitation.

Improvements in the distribution of the water supply have been effected at Lambert's Place and Hill Top, Washington, and a pure and adequate supply of water will shortly be provided for Hammer Square, Streetgate, Eighton Banks, High Usworth and Springwell, the Vale Pit and Low Flatts, these places having a total population of 3,300. A pure supply of water is still needed for Fatfield.

The removal of house refuse and scavenging is undertaken or contracted for by the District Council in the township of Washington, and in the greater part of the townships of Birtley and Chester-le-Street.

Improved privy and ashpit accommodation has been provided in many parts of the district, and the drainage and general sanitary condition of the houses in several of the townships have been greatly improved. This appears to have been especially the case in the Washington, Usworth, and Pelton townships.

The drainage of Fatfield village is in a very inefficient and defective state, and many of the houses are very insanitary. At Low Flatts the houses are without any drainage or water supply, and are generally in bad condition, and the state of very many of the houses at Lumley, owing to want of general repairs and privy accommodation, is very unsatisfactory. At Upper and Lower Streetgate, and at Eighton Banks, many of the houses are stated to be without privy accommodation or spouting. A number of notices were served by the District Council under the Housing of the Working Classes Act with regard to insanitary property, notably at Fatfield and Lumley.

An extensive scheme for the sewerage and disposal of the sewage of the Usworth and Washington districts has received the approval of the District Council, and a loan for carrying it out is to be obtained, subject to the sanction of the Local Government Board. The sewage is to be taken into precipitating tanks, and then to be conducted by sewers into the

approved by the Council for the sewerage, &c., of the Pelton and Beamish districts, the sewage disposal works to be near Pelaw Hill Farm. Plans for the disposal of the sewage of Chester Moor and parts of Chester-le-Street and Pelton Fell have also been approved. The villages of Fatfield and Lumley still require to be properly drained, as does the hamlet of Low Flatts. The existing sewage disposal works in the district appear to receive more sewage than they can properly deal with.

Sanitary Requirements.

Improvements in the house accommodation, drainage, privy accommodation, and water supply of several villages is very greatly needed, as will be gathered from the above summary, and the District Council should take active measures to get the defects remedied. At Fatfield, Lumley, Eighton Banks, Low Flatts, and Streetgate, energetic action appears to be especially necessary.

DARLINGTON RURAL DISTRICT.

CHARLES M. HARDY, M.B., Medical Officer of Health.

Area in Acres, 42,034. Estimated Population, 1895, 9,367. Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

21'1 14'4 1'17 141

Phthisis death-rate, 1.28; Respiratory diseases death-rate, 1.81. The above mortality statistics, though not so favourable as last year, are still very satisfactory. The birth-rate is the lowest of any district in the county. The whole of this district is now

situated in the County of Durham; what was formerly the Yorkshire portion of the district now being called the Croft rural district.

Infectious Diseases.

The notified cases numbered 41, and half of these were scarlet fever, which, however, did not cause a single death. The disease in several instances was imported from the adjoining urban districts. The only fatal case of diphtheria occurred in a damp, insanitary house. Of the 12 cases of enteric fever 7 occurred at Middleton-St.-George, and 6 of these were in one house which obtained its water supply from a sewage polluted well, which has since been closed. During the early part of the year measles and whooping cough were very prevalent in the Hurworth district, and it was found necessary to close the schools for seven weeks. All cases of infectious disease notified are visited and, if necessary, the patient is removed to hospital. Ten cases were isolated in the Darlington borough hospital during the year, and two of the cases of enteric fever so isolated died, but neither of the deaths have been included in the mortality statistics, though one of the deaths appears to belong to the district.

General Sanitation.

The wells supplying water to the district are stated to have been systematically inspected and the water analysed, with the result that four of the wells have been closed on account of the bad quality of the water. The flushing of the drains and the cleansing

of cesspools are also stated to have received attention. The midden-privies of 16 houses at Middleton-One-Row have been replaced by water-closets. Several private drains which discharged sewage into the Tees have been taken up. The district has been regularly inspected, and 151 nuisances are stated to have been abated as a result of notices served by the inspector of nuisances. The dairies in the district have been inspected and the milk sellers registered. Dr. Hardy recommends "that more pressure be brought to bear "upon property owners to render the houses less "damp by proper spouting, &c."

Sanitary Requirements.

The recommendation of the medical officer of health as to spouting of the houses in the district should receive the attention of the District Council.

DURHAM RURAL DISTRICT (Eastern Division).

W. A. HEPBURN, M.D., Medical Officer of Health.

Area in Acres, 15,324. Estimated Population, 1895, 15,409.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

37.9 19.7 1.1 194

Phthisis death-rate, 1.3; Respiratory diseases death-rate, 3.1. The death-rate from the chief zymotic diseases was low, but the general death-rate and the infantile mortality-rate were much higher than in the previous year.

Infectious Diseases.

There was a marked decrease in the number of cases of infectious disease notified, which Dr. Hepburn attributes to the better sanitary condition of

the district, which has resulted from the District Council undertaking the scavenging of the populous portions of the district. The most prevalent disease was scarlet fever (112 cases). 21 cases of typhoid fever were reported, and as neither the water or milk supply or defective sewerage could be blamed for any of the cases the medical officer of health is inclined to believe in the direct infectivity of the disease. Personal attention to all cases of fever is given by Dr. Hepburn, and he also sends certificates to the various school managers to enable them to exclude children from infected houses.

General Sanitation.

Owing to improvements in the pumping the water supply to East Hetton, Cassop Colliery, and Quarrington Hill has been more plentiful and regular than formerly. Carnaby's Buildings have been provided with a proper water supply. 87 notices under the Housing of the Working Classes Act have been served by the District Council, and closing orders have been obtained with respect to 52 houses.

A complete scheme has been adopted for sewerage and sewage disposal works at Cassop Colliery village, and schemes having also been adopted for other villages in the Belmont and New Durham districts, application to the Local Government Board has been made for loans for carrying them out. Considerable improvements have been effected in the drainage of East Hetton, Ludworth, and Davy Lamp villages.

The District Council are actively engaged in

taking steps to prevent the pollution of the streams and rivers in their district.

Sanitary Requirements.

The recommendation of the medical officer of health made in 1891, respecting the demolition of the second row of ruinous houses at West Hetton, Coxhoe, has not yet been carried out.

DURHAM RURAL DISTRICT.

(Western Division).

EDWARD JEPSON, M.D., Medical Officer of Health.

Area in Acres, 15,730. Estimated Population, 1895, 11,527*
Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

37.3 16.3 1.47 1.71

Phthisis death-rate, 0'34; Respiratory diseases death-rate, 4'33. The infant mortality-rate is rather high, but the general and zymotic death-rates are fairly satisfactory.

Infectious Diseases.

Scarlet fever was the most prevalent disease (149 cases), the most cases being reported from Bearpark village, where the disease was epidemic, and its prevalence there is attributed "to the cases not being "more frequently taken to hospital, and thus allowing "the epidemic to be stamped out." Dr. Jepson regrets that the isolation hospital, to which 15 cases were removed, is not more used. There were only 13 cases of enteric fever reported, and two of these were removed to the County Hospital for isolation. One case appears to have been the result of bathing in the

^{*} The population is reduced by nearly 8,000, owing to the township of Tudhoe no longer being included in this district.

river Browney, which is polluted by sewage. All the notified cases of infectious disease are investigated by the medical officer of health, and the houses in which they occur inspected for sanitary defects. There were 94 houses disinfected after infectious disease.

General Sanitation.

Two samples of water were analysed and certified by the analyst to be polluted with excretal matter, and the wells were not permitted to be further used. The various sewers in the district have been properly flushed and disinfected. A new pipe sewer has been laid down Margery Lane. The sewage disposal works for Broom will shortly be proceeded with, and as a result of action by the County Council schemes for disposing of the sewage of several villages which at present cause river pollution are being prepared.

Sanitary Requirements.

- 1. The making and levelling of the private streets in the Parish of Neville's Cross is stated to be much needed.
- 2. It is also recommended that the scavenging and the removal of house refuse in the Parish of Neville's Cross should be undertaken by the District Council.

EASINGTON RURAL DISTRICT.

James Arthur, L.R.C.P., D.P.H., Medical Officer of Health.

Area in Acres, 36,942.		Estimated Population, 1895, 43,097.	
Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality-rate.
40.2	19.2	2.20	182

Phthisis death-rate, 1.27; Respiratory diseases death-rate, 2.94. The general death-rate and infant mortality-rate were both slightly higher than in 1894, though comparing favourably with the rates of previous years.

Infectious Diseases.

The most prevalent diseases were scarlet fever (252 cases) and typhoid and continued fevers (130 cases). The first-named disease, which was not so severely epidemic as in 1894, was most prevalent in the Haswell and Seaham districts, and its incidence is stated to have been greatest in the cold weather, when the children would naturally mix more and closer together. Dr. Arthur thinks that school closing does not keep the children apart, and that the stamping out of scarlet fever is impossible except by isolation of the patients in hospital, to which the parents have an objection. One case of small-pox occurred at Wingate, and 2 cases of typhus fever at Haswell and 1 at Thornley. These were all removed to the isolation hospital, and no other cases resulted from them. Of the 87 cases of enteric fever, 20 occurred in the third and 49 in the last quarter of the year. Cases were reported from every township except Kelloe, the incidence being most marked on the townships of Haswell, Murton, and Hutton Henry. Several of the cases in the early part of the year are stated to have been imported into the district, while others of them at Castle Eden and Hawthorn may have resulted from the drinking of impure water. The subsequent and

more numerous cases during the autumn are supposed to have been the result of infection from the earlier cases in each locality, the carrier of infection being either dirty linen or bedding, or specifically infected ashpits, the contents of which are easily brought into contact with the food in the houses by the flies that swarm about at that time. Dr. Arthur points out that the precautionary measures against the spread of enteric fever are isolation of the patient, scrupulous cleanliness of the patient and his surroundings, and proper disinfection of his excreta, and, against an outbreak of the disease, a good water supply and efficient scavenging; and he adds: -" That these items are not attended to, "we know, and hence the disease exists." Diarrhœa was very fatal during the hot weather and caused 52 deaths, all but two of these being children under 5 years of age. The cases removed to the isolation hospital numbered 9. The question of enlarging the hospital accommodation has not yet been definitely determined.

General Sanitation.

The sanitary improvements effected include improvements in the sewerage of Hawthorn, Trimdon Foundry, Easington, and Shotton villages by the laying down of additional sewers. At South Hetton the surface channelling of three streets has been reconstructed, the sewage of Easington village has been diverted so that it no longer pollutes a stream used by cattle, and instructions have been given for considerable sewering at Wingate Lane and Wheatley Hill.

At Wingate 43 old cottages have been raised and greatly improved, and 20 notices were served under the Housing of the Working Classes Act, but were withdrawn when compliance had been made with the requirements. At Wheatley Hill 200 houses have been provided with outdoor conveniences, and similar improvements have been effected to a less extent in other parts of the district.

Easington village has now a proper water supply, and arrangements are being made for supplying Station Lane, Wingate, and a large portion of Castle Eden with suitable drinking water. At Hawthorn village, Fallowfield, and Trimdon Foundry the water supplies were found to be polluted during conveyance and delivery, and the supplies are stated to have been improved by structural alterations. There is still no supply to Wingate Lane, as the report states that the bringing of water to the houses from Thornley Colliery has been found to be impracticable. Attempts are to be made to obtain a water supply by boring and sinking a well. The notices served under the Public Health Act, 1875, numbered 30, and 200 verbal notices are stated to have also been given; but the sanitary work of the district was interrupted by a long illness of the inspector of nuisances.

The District Council have agreed to undertake the work of scavenging and refuse removal in one section of the district wholly occupied by private property, and Dr. Arthur remarks that "This experiment "will determine whether that can be done best by the

"Council or left to private individuals;" but there can be no doubt, as proved by the experience of other districts, that scavenging and refuse removal is never efficiently performed when left to the occupiers, and in populous districts can only be properly carried out when undertaken by the Sanitary Authority.

Sanitary Requirements.

1. Improved isolation hospital accommodation, and a proper steam disinfecting apparatus.

The continued prevalence of enteric fever and infantile diarrhœa during summer and autumn suggests that there are many insanitary conditions in the district which require attention.

HARTLEPOOL RURAL DISTRICT.

S. Gourley, M.D., Medical Officer of Health.

Area in Acres, 18,368. Estimated Population, 1895, 2,440.*

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

26.6 I 3.1 3.68 I 23

Phthisis death-rate, nil; Respiratory diseases death-rate, 1.63. The general death-rate is satisfactory and lower than in the two previous years, but the zymotic death-rate, chiefly owing to the large mortality from diarrhœa, is very high.

Infectious Diseases.

Of the 32 notified cases, 5 were in the work-house and 21 at Greatham. All the scarlet fever cases, and all but one of the diphtheria cases occurred in Greatham village. The scarlet fever cases were

^{*} There is also in the district a population of 460 in the Union Workhouse and Port Sanitary Hospital, and in these two institutions 106 deaths occurred in 1895.

mostly of a mild type, "and some of the cases were "not notified, nor any attempt at isolation made, hence "the disease spread." Disinfectants were supplied to all cases of infectious disease, and instructions given as to the precautions to be employed to prevent a spread of the infection. No cases were removed to the isolation hospital. Diarrhæa caused 6 deaths, equal to a rate of 2.5 per 1,000 population.

General Sanitation.

"Many useful sanitary improvements in drainage, spouting and repairs have been done during the
year." Several new cottages have been built at
Greatham, "but more are still needed instead of some
old and dilapidated ones."

The water supply has been examined and found satisfactory, and the wells have been repaired where needed, and cemented round to prevent surface contamination.

The dairies have been periodically inspected and are in good order, and "the district is in a much "better sanitary state than a few years ago."

In 1894 a case of enteric fever occurred in the workhouse, and another case occurred last year. The drinking water was analysed and reported to be of good quality, but in the previous year it was found to be polluted. In the inspector of nuisances department 130 informal and 13 formal notices were served for the abatement of nuisances, and, with the exception of 10, they were all complied with by the end of the year. There are 30 registered milksellers in the district.

Sanitary Requirements.

- I. Improved house accommodation for the village of Greatham appears to be still needed.
- 2. The occurrence of another case of typhoid fever in the workhouse, as well as 4 cases of erysipelas, suggests the existence of some defect there, and an enquiry into its sanitary condition appears to be desirable.

HOUGHTON RURAL DISTRICT (Northern Division).

D. S. Park, F.R.C.S., Medical Officer of Health.

Area in Acres, 8,399. Estimated Population, 1895, 13,940. Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

36.3 18.2 1.86 197

Phthisis death-rate, 1'36; Respiratory diseases death-rate, 2'94. The infant mortality-rate was very high, and there was also a slight increase in the general death-rate as compared with the previous year, but the zymotic death-rate was lower, and there was also a considerable decline in the birth-rate.

Infectious Diseases.

The number of cases notified was less by 27 than in 1894, and the only disease which showed an increase in prevalence was enteric fever, of which 90 cases were notified as compared with 44 cases in the previous year. It was most prevalent in the Newbottle district, and 7 of the 9 fatal cases occurred in that township. Dr. Park points out that the distribution of the disease was such that no blame could be attached to the milk or water supplies as causes of its prevalence,

and most of the cases would appear to have resulted from local insanitary conditions, such as foul and leaking privy ashpits, &c. The cases of enteric fever appear mostly to have been of an anomalous type, as diarrhœa was a rare symptom, and in many instances there was evidence of the disease being very infectious. There was not a single death from diphtheria or scarlet fever, but diarrhœa was rather fatal and prevalent, causing 13 deaths, the majority of which were in the Newbottle district. All the cases of notified infectious disease are visited by Dr. Park, who points out the great benefit resulting from the isolation of infectious cases in hospitals where, as usually happens in colliery villages, proper isolation at home is impossible.

General Sanitation.

The general water supply is stated during the year to have been satisfactory, though part of it is subject to intermittent pollution, and by a standing order of the District Council the water is analysed every six months. Improvements in the water supply have been made at North Sunniside and Cox Green, and the improvement of the water supply to some scattered houses near Silksworth is under consideration, but the drinking water has still to be carted to East and Middle Herrington. Considerable sanitary improvements have been effected in very many parts of the district during the past year, especially with regard to privy accommodation, drainage and sewerage, and general repairs to house property. Among the places where such improvements were effected are Herrington,

Philadelphia, Shiney Row, Old and and New Penshaw, Bunker Hill, Success, Bank Head, and Cox Green. Notices under the Housing of the Working Classes Act were served in regard to 17 houses, and several were complied with though some are still pending. The scavenging is stated to have been fairly well carried out, "although complaints have been made to "your Authority of the careless and irregular way in "which some of the ashpits have been emptied." This was especially noticeable at North and South Sunniside, and "the strictest supervision should be exercised to "see that the contractors do not shirk their work." The dairies, cowsheds, and slaughter-houses have been inspected, and appear to have been kept in a good condition.

Sanitary Requirements.

I. A proper water supply for Middle and East Herrington.

The report is **not** printed.

HOUGHTON RURAL DISTRICT (Southern Division).

J. R. Sutherland, L.R.C.P., Medical Officer of Health.

Area in Acres, 4,791. Estimated Population, 1895, 5,952.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

32'2 I4'9 O'67 I82

Phthisis death-rate, 1.00; Respiratory diseases death-rate, 2.68. The death-rate and zymotic rate are very satisfactory, but the infant mortality rate is rather high.

Infectious Diseases.

There were only 37 cases of these diseases notified during the year, including 17 of scarlet fever and 8 of enteric fever. There were however two deaths from membranous croup, though no cases of this disease appear to have been notified. There were no deaths from enteric fever, and only one death from diarrhæa.

General Sanitation.

The Moorsley water supply has been improved by the substitution of proper metal pipes for the old earthenware pipes that formerly conveyed the water from its source to the reservoir. A sample has since been analysed by the County Analyst, who pronounced it to be a good and wholesome drinking water. At the Stables Farm, and at the White House, off Pit House Lane, the water supply is still bad.

The scavenging of West Rainton village is stated to be very well attended to, but "in other "portions of the district there are occasional com-" plaints, and often with good reason."

The houses and their surroundings at Cocken Terrace have been improved, but the road to and along by these houses is in a very bad condition and in need of repair.

The report advises that the Rainton Freehold should be provided with covered sewers and trapped gullies, instead of the present open channels.

At Grainger's Terrace the sewer has not sufficient fall and as a result the house drains frequently become stopped up.

Sanitary Requirements.

- I. The provision of a proper water supply for the Stables Farm and the White House.
- 2. A covered system of drainage for the Freehold.
- 3. The defects of drainage at Grainger's Terrace should be remedied at once.

The report is **not** printed.

LANCHESTER RURAL DISTRICT (Lanchester Division).

J. Wilson, M.D., Medical Officer of Health.

Area in Acres, 29,956. Estimated Population, 1895, 16,419.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

42'2 21'8* 2'37 154

Phthisis death-rate, 0'91; Respiratory diseases death-rate, 6'09. The general death-rate was about the same as last year and above the average, while the mortality from respiratory affections was again very high.

Infectious Diseases.

Scarlet fever was the most prevalent disease (459 cases), and its type was much more severe than in previous years, as is evidenced by the fact that there were 16 deaths. It was especially epidemic and fatal in the Esh township, and was also prevalent in the Lanchester district. 35 cases of enteric fever were reported, most of them in October, and from the Esh and Lanchester townships. The cause of many of the

^{*} Excluding 22 deaths not belonging to the district the death-rate would be 20'4 per 1,000.

first cases could not be traced, but the occurrence of second cases in some of the houses resulted from want of special cleanliness in nursing. The new isolation hospital at Langley Park is almost completed, and will be ready for the reception of patients during the present year.

General Sanitation.

A pure supply of drinking water has been laid on to several populous portions of the district which previously were without this important requirement, including Hedley Fell, Cornsay Village, Esh, and Malton Colliery. At Burnhope, Ushaw Moor, Hedley Fell, and other parts of the district considerable improvements in the houses and their surroundings have been effected. The report recommends that the kitchen floors of the houses at Ushaw Moor, several of which are damp, should be cemented. At Hamsteels Colliery a row of 16 houses, known as the Huts, are stated to be unfit for habitation, and the drainage, spouting, and the condition of the ashpits of this village are greatly in need of improvement. At Quebec a new system of drainage is to be provided at once. At Cornsay Colliery the sewer in Commercial Street passes under several of the houses, and it is advised that a new sewer be laid down at a distance from the houses, and also that the ashpits in the village should be covered in.

The dairies and cowsheds in the district are stated to have generally been kept clean, though many of them are small for the number of cattle they contain, and their lighting is insufficient.

A large number of notices for the abatement of nuisances have been served by the District Council, and when necessary legal proceedings have been taken to enforce them.

Sanitary Requirements.

- I. The closing of the Huts at Hamsteels Colliery and the remedying of the drainage and other defects existing in the village.
- 2. The removal of the defects of drainage and privy accommodation at Cornsay Colliery Village.
- 3. The cementing of the kitchen floors of the damp houses at Ushaw Moor.
- 4. The better lighting of the cowsheds and the allowance of a greater cubic air space in some instances.

LANCHESTER RURAL DISTRICT (Medomsley Division).

W. T. Bolton, L.R.C.P., Medical Officer of Health.

Area in Acres, 21,213. Estimated Population, 1895, 7,648.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

33'3 19'0 2'2 184

Phthisis death-rate, 1.96; Respiratory diseases death-rate, 4.05. The above statistics compare very unfavourably with those of 1894.

Infectious Diseases.

Enteric fever was the most prevalent disease (46 cases), and all the cases were notified from the Medomsley township, where the disease was epidemic

during the third quarter of the year. No reference is made in the report to the cause of the prevalence of this preventible disease. Scarlet fever was much less prevalent than in the previous year, and only caused one death, while there were no deaths from measles or whooping cough.

General Sanitation.

The houses have been spouted and the drainage improved at Derwent Cottages, and the conveniences and yards at Bradley Cottages have been put into a good sanitary condition. At Dene Bank, Hamsterley Colliery, and in other parts of the district improvements in the privy accommodation have been effected.

Steps have been taken to prevent the contamination of water supply at the well on Ebchester Hill.

"The works for the disposal of sewage from "High and Low Westwood, Croniwell, and part of "Allendale Cottages are nearly complete. At Blackall "Mill a sewerage scheme is in contemplation, and im- "provements to defective premises are now in course of "execution at this place."

The dairies and cowsheds are said to be in a fairly good condition, and the scavenging of the villages is on the whole satisfactory.

LANCHESTER RURAL DISTRICT (Stanley Division).*

T. Benson, L. R.C.P., Medical Officer of Health.

Area in Acres, 9,543. Estimated Population, 1895, 15,500.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

36.7 19.2 1.2 170

Phthisis death-rate, 1.8; Respiratory diseases death-rate, 2.5. The general death-rate is slightly higher, but the above statistics are otherwise very similar to those of last year.

Infectious Diseases.

Scarlet fever was rather less prevalent than usual, but during October it became so epidemic in the Kyo township that it was found necessary to close the elementary schools for a time. Enteric fever was again rather prevalent in Dipton, and the cases were mostly "the offspring of an outbreak that began in the "village of Dipton in the summer of 1893." No suspicion could be cast on the milk or water supply of Dipton, and Dr. Benson thinks that the cause may be looked for in the present arrangements of the out offices, many of the ashpits being uncovered and not cemented, so that infective material percolates into the soil close to the dwellings. Diarrhæa was much less prevalent than usual.

General Sanitation.

Three houses at Clough Dene and one at

^{*} The statistics of the newly-formed urban district of Tanfield, which up to June 15th last was part of this rural district, are for the whole of 1895 included in the above statistics. The statistics of the Tanfield urban district for the last 29 weeks of 1895 were:—Birth-rate, 35.2; death-rate, 21.0; zymotic-rate, 1.5.

Burnopfield have been closed as unfit for habitation, and a large number of houses throughout the district have been spouted and otherwise improved. At Mountsett, Clough Dene, and Tanfield (all these villages are now in the Tanfield Urban District), the report states that there are several houses in a dilapidated and insanitary state, though they have been condemned as unfit for habitation. The covering over and the rendering water-tight of the old-fashioned conveniences in the Tanfield urban district is advised, and the report on the same district also points out that the sewerage and sewage disposal of Flint Hill, Clough Dene, Causey Rows, and part of Hobson Friarside require to be improved.

The water supply to the whole district is satisfactory, and the scavenging and removal of house refuse has been fairly well attended to, though the report on the Tanfield urban district states that "it "would be more effectually done if placed under the "direct control of the board." The dairies have been periodically inspected and the slaughter-houses are said to be satisfactory.

Sanitary Requirements.

- 1. The closing (failing their being put into a sanitary condition) of the insanitary houses existing in the Tanfield urban district.
- 2. The covering in and cementing of the old ashpit-privies, or better still, their replacement by small ashclosets.
 - 3. In the urban district, and in the more

populous portions of the rural district, the District Councils should hold themselves responsible for the scavenging and the removal of house refuse.

SEDGEFIELD RURAL DISTRICT.

G. R. SHERATON, L.R.C.P., Medical Officer of Health,

Area in Acres, 45,011. Estimated Population, 1895, 18,223.

Birth-rate. Death-rate. Zymotic death-rate. Infant mortality-rate.

40'4 20'5 2'08 199

Phthisis death-rate, 1.2; Respiratory diseases death-rate, 2.9. The birth-rate is very high, and there is a considerable increase in both the general death-rate and infant mortality-rate as compared with 1894. There were 204 deaths in the County Asylum which are not included in the above statistics.

Infectious Diseases.

There was a slight decrease in the number of notified cases. Scarlet Fever was epidemic at the Trimdon Collieries, West Cornforth, Metal Bridge, and at Fishburn, and at the two last-named places the schools were closed as a means of coping with the disease. All the notified cases of diphtheria (8) were at West Cornforth and Metal Bridge. There were 30 cases of enteric fever, 13 of which were at the Trimdons, and 11 at Cornforth. At the Trimdons the disease has continued for more than 2 years, and is attributed to the small overcrowded dwellings, and to the insanitary surroundings; while at Cornforth the disease was "disseminated by want of care in the disposal of the "excreta and by the prevailing insanitary conditions,"

Measles was most prevalent at Fishburn and Bishop Middleham, and the schools were temporarily closed in consequence. Diarrhœa was very prevalent and fatal during the summer and autumn, as was also whooping cough.

General Sanitation.

The sewers of the district have been extended by 1,450 yards, notably at Fishburn. Nuisances have been very frequent from the accumulations of house refuse, and there is considerable difficulty in getting it removed at regular intervals, and Dr. Sheraton regrets that the District Council have taken no steps to carry out a system of scavenging in the more populous villages within the district.

Closing orders were obtained from the magistrates with regard to 12 insanitary houses at West Row, Chilton, and legal proceedings were also taken against the owners of 44 houses at Chilton Lane for the remedying of structural defects. The cowsheds and dairies are stated to have been kept in a satisfactory condition, and in some instances a purer water supply has been provided for the farms. The village of Old Trimdon is now supplied with drinking water, and the village pumps throughout the district have been kept in good working order.

Sanitary Requirements.

1. A permanent and properly equipped isolation hospital.

2. The removal of the insanitary conditions which appear to have favoured the prevalence of enteric fever at the Trimdons and Cornforth.

3. The District Council should themselves contract for or undertake the work of cleansing the ashpits, &c., and the removal of house refuse in the more populous parts of the district.

SOUTH SHIELDS RURAL DISTRICT.

W. Armstrong, L.R.C.P., Medical Officer of Health.

Area in Acres, 12,409. Estimated Population, 1895, 14,770.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

30'7 I 5'5 I '9 I 47

Phthisis death-rate, 1'2; Respiratory diseases death-rate, 2'3. The estimate of the population given in the report appears to be rather a high one. Calculated on that estimate the vital statistics are fairly satisfactory, though generally slightly higher than in 1894.

Infectious Diseases.

Scarlet fever (113 cases) was prevalent during the whole year, but especially during the last quarter. The disease was generally of a mild type, and only caused two deaths. There was a decrease in the number of cases of typhoid fever reported, more particularly from Boldon Colliery, and the report states that this decrease may certainly be attributed to the improved condition of the streets and the general condition at the colliery. Most of the cases of enteric fever appear to have been associated with some insanitary condition.

General Sanitation.

The reports deals in detail with the sanitary defects discovered by the medical officer of health each

month during his inspections, and many of them have since been removed.

The houses at White Mere Pool have now been put into a habitable condition and provided with a pure water supply. A supply of water has also been laid on to the Marsden Houses. Two houses have been closed at Whitburn village as unfit for habitation.

Owing to the unloading of ashpit manure at the railway sidings at Cleadon Lane station a great nuisance is often caused, and as a result of action by the District Council the railway company have undertaken to stop manure being brought to the depôt during the hot weather.

The river Don still continues to be very much polluted by sewage which enters during its passage through the Chester-le-Street rural district, although the Council of that district have been requested to prevent the pollution, which appears to endanger the health not only of the cattle which drink the water but of the tenants of neighbouring farms.

A great improvment is stated to have been effected in the sanitary condition of Boldon Colliery owing to the making of footpaths, the paving of several of the back streets, &c. The substitution of small ash-closets for the large ashpit-privies and a more regular system of scavenging are sanitary improvements still needed.

Sanitary Requirements.

The report again refers to the insanitary con-

dition of some of the houses at Fenwick's Row, Boldon Colliery, and recommends that a house-to-house inspection of the row should be made. This should certainly be done.

The district is still without any isolation hospital.

STOCKTON RURAL DISTRICT.

J. W. Blandford, L.R.C.P., Medical Officer of Health.

Area in Acres, 34,228. Estimated Population, 1895, 12,670.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

27.2 I 6.4 I 97 I 76

Phthisis death-rate, 0.55; Respiratory diseases death-rate, 1.88. The above mortality statistics do not compare favourably with those of the previous year, but with the exception of the infant mortality-rate they are fairly satisfactory.

Infectious Diseases.

Scarlet fever was seriously prevalent during the whole year, both in Billingham (95 cases), and Norton (84 cases). Nearly all of the Billingham cases were at Haverton Hill. The disease was of a very mild type and only proved fatal in four instances. Of the 40 cases of enteric fever, 29 were at Carlton Ironworks in the autumn, where it was "caused by the "soft ground in the unmade back streets being "saturated with sewage, night-soil, and decomposing "matter. The Authority served notices to have this "condition remedied, but the work has not yet been "done. It should certainly be carried out at once, "and avoid the occurrence of such a dangerous

"epidemic being repeated." Diarrhœa was very prevalent during the autumn, and its cause is attributed to the milk supply, owing to the cows having been put on to very flush fogs. The cases removed to the isolation hospital during the year numbered 26, and a contract has been made with the Stockton Corporation so that infectious cases from the rural district can now be removed to the Borough hospital.

General Sanitation.

The drainage of the district is said to have been kept under proper supervision. A large flushing chamber has been erected at the head of the Norton main sewer, and ventilating shafts are being placed on the different sewers where necessary. The sewers at Wolviston are believed to get foul, and more frequent flushing is recommended. The report points out the necessity of a sewer at Fairfield. In most of the populous places the scavenging is undertaken by the District Council, and the old middens are being rapidly replaced by the small ash-closets which are required to be emptied once a week. At the Carlton Ironworks the open insanitary ashpit-privies still exist. water supply to the district has been good, though at one time during the summer the water company's supply was rather turbid, and the company are taking steps for the filtering of the whole of the supply. The District Council have decided to sink a new well at Thorpe, as since a change took place in the drainage the old water supply has been of suspicious quality. At Billingham most of the inhabitants now use the water company's water. The dairies and cowsheds have been considerably improved since the adoption of regulations. Some are still in need of enlargement and improvement, but notices have been served for this work to be done. Some carcases of meat which were unfit for food have been destroyed.

Sanitary Requirements.

- 1. The sewerage of Fairfield and the more frequent flushing of the sewers at Wolviston.
- 2. The making of the back streets at Carlton Ironworks and the abolition of the insanitary ashpit-privies there.

SUNDERLAND RURAL DISTRICT.

T. Coke Squance, M.D., L.S.Sc., Medical Officer of Health.

Area in Acres, 7,404. Estimated Population, 1895, 18,835.

Birth-rate. Death-rate. Zymotic death-rate. Infant mortality-rate.

42.5 20.9* 3.7 I 182

Phthisis death-rate, 1.80; Respiratory diseases death-rate, 3.18. The general death-rate is 2.5 per 1,000 higher than in 1894, and was almost entirely due to the largely increased infant mortality in the colliery villages of Ryhope and New Silksworth. Dr. Squance thinks that there is some connection between infant insurance and infant mortality, and suggests that the Coroner should hold an enquiry into all deaths of infants from atrophy, debility, marasmus, and convulsions, "so that the facts as to the proportion of

^{*} The total death-rate, which includes the deaths of 15 persons not belonging to the district, was 21.6.

"children so dying that are insured might be brought to light."

Infectious Diseases.

Scarlet fever (179 cases) and enteric and continued fevers (122 cases) were the most prevalent of the notifiable diseases. Dr. Squance thinks that it is almost impossible to control the spread of scarlet fever in colliery districts unless every case is removed to hospital, the precautionary measures being looked upon by the bulk of the people as "fads," which they object to carry out. A large portion of the report is devoted to the consideration of the prevalence of enteric fever in the district. Ryhope was the district most severely invaded by the disease, no less than two-thirds of the typhoid cases and all the cases of continued fever occurring there, while the death-rate from these diseases was far higher than in any other part of the district. As has been noticed in other colliery districts, the great majority of the cases occurred in males, and this fact suggests that the occupation of the men or the surroundings of their work may not be unconnected with the prevalence of enteric fever in these districts. The majority of the cases occurred in the months of October and November, heavy rain falling in the former month after a very hot and dry September. As to the type of the disease, Dr. Squance's observations confirm those of several other medical officers of health, as of late years he has noticed that it has been altering both as to symptoms and degree of severity. In many cases, instead of

diarrhœa there was marked constipation, accompanied by bleeding from the nose, pains in the head and limbs and intense prostration, while in every case abdominal tenderness was to be noticed, "and the question "frequently arose as to whether the disease was typhoid "or a form of typhus." Neither the water or milk supply were in Dr. Squance's opinion responsible for the prevalence of typhoid fever in the district, but "the principal cause of the continued prevalence of the "disease is in my opinion ground pollution "which pollution is due in great measure to the objec-"tionable privy-middens, the soil at the bottoms of "which have become saturated with filth. The surface " of the roads in their neighbourhood is also in the "same condition from the contents of the ashpits "having been emptied upon them, and to a certain "extent sunk in, in consequence of their not being "paved, which again prevented proper cleansing. "This especially applies to Ryhope, in which I have "shown the heaviest incidence of fever occurred." Diarrhœa was very prevalent and fatal (41 deaths) and Dr. Squance points out that the statistics of his district bear out the statement "that there is an inverse ratio "between the rainfall and the mortality from diarrhœa," and that during the last four years the outburst of typhoid fever "has generally occurred the month fol-"lowing the outbreak of diarrhoea, which certainly "appears as though there was an intimate relationship "between the two." There was not a single case of diphtheria notified during the year. The Local

Government Board has given its sanction to the proposed site for the isolation hospital, and the ground has since been purchased. The report urges that the hospital should be erected with as little delay as possible.

General Sanitation.

The main sewer of Ryhope and New Silksworth has become inadequate, and the surveyor has therefore prepared a plan for a new sewer at an estimated cost of £4,000. The Local Government Board has approved of the scheme for the sewerage of Grangetown and district, the estimated cost of which is £2,500.

A flushing van and hose has been purchased for flushing the sewers, and "a system of regular flush-" ing will be carried out in future."

The water of the well supplying Tunstall village was again analysed during the year and reported to be very good and suitable for drinking purposes, and evidently "a deep well water," though as a matter of fact "the well is only 8 feet deep, and becomes "quite dry in hot and droughty weather." An opinion on the suitability of a water for drinking purposes, based on the results of a chemical analysis only, and without a knowledge of the source and surrounding of the supply, is never reliable and often misleading, and Dr. Squance rightly considers "that the well, "from its proximity to a sewer and a cemetery, is in "constant danger of being seriously polluted, and should be closed." During the year there was some

evidence of the failure of the drinking water supply to New Silksworth, and very great difficulty is stated to be found in supplying the higher portion of New Silksworth with water.

In discussing the milk supply the medical officer refers to the liability of the milk to contamination during milking as usually carried out, and says: "In my opinion cows should never be milked in byres, "but in a properly constructed shed set apart for the "purpose. All dung should be washed from their "udders, and the hands of those engaged in milking "should be scrupulously cleansed." Some improvement in the method of excrement disposal has been effected, notably in the Ryhope district, by cementing and raising the floors of the ashpits and improving the privies, but (referring to Ryhope) "even then they "can never be free from danger, as they are much too "large and too near the houses, and have in their "present state contributed year after year to the pollu-"tion of the soil, to which I attribute to a very great "extent the presence of enteric fever." The District Council have now arranged for the cleansing of the ashpit-privies and the removal of house refuse in nearly every portion of their district, "with the result that a "very great improvement has been effected in the "sanitary condition of the places affected." The backto-back houses at Ryhope, to which reference has been made in previous reports, still exist. "The con-"dition of affairs should be rectified by providing " elsewhere for the tenant occupying the back rooms,

"and thus allowing the partition to be taken down and the houses again occupied by one family as originally intended.

The building bye-laws have been revised, but have not yet been discussed by the Council. It is recommended that urban powers be obtained without delay, so that bye-laws might be made for the regulation of slaughter-houses, offensive trades, &c. The cesspools at Fulwell have again been a great nuisance, sewage running down the public road and emitting an abominable stench, and the three cases of typhoid fever which occurred in the neighbourhood were attributable to the cesspools. "It is most desirable that "a sewer should be laid to drain this portion of the "neighbourhood." At Ford and Hylton action has been taken under the Housing of the Working Classes Act with respect to some of the old property.

Sanitary Requirements.

- 1. The closing of the well at Tunstall and the provision of a purer supply of drinking water for the village.
- 2. The conversion of the back-to-back houses at Ryhope into single houses with through ventilation.
- 3. The laying down of a proper sewer for Fulwell so that the objectionable cesspools may be abolished.
- 4. The abolition or at any rate the reconstruction of the insanitary ashpit-privies in the district.
 - 5. New building bye-laws and the obtaining

of urban powers, so that regulations with respect to slaughter-houses, offensive trades, &c., might be made.

6. The isolation hospital should be erected without any delay.

WEARDALE RURAL DISTRICT.

(Derwent Division).

C. J. Connon, M.B., Medical Officer of Health.

Area in Acres, 13,144. Estimated Population, 1895, 523.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

24.8 I 5.3 Nil. Nil.

Phthisis death-rate, 1.91; Respiratory diseases death-rate, 1.91. The general death-rate was the same as in 1894, but the birth-rate is considerably higher.

Infectious Diseases.

One case of enteric fever occurred at Edmondbyers in August, the disease having been contracted outside the district. Special precautions were taken to prevent the spread of the disease, and no further cases occurred. The Notification Act has not been adopted in the Weardale rural district.

General Sanitation.

The district is stated to have been regularly inspected during the year, and a few nuisances of the ordinary kind have been abated. One insanitary house at Ruffside has been closed. The back-to-back houses at Ruffside still exist. The water supply during the year has been abundant and of excellent quality, and the supply to Edmondbyers is stated to have been improved. Improvement in the ashpit-privies is gradually being effected.

Sanitary Requirements.

None specially referred to.

The report is **not** printed.

WEARDALE RURAL DISTRICT.

(Stanhope Division).

T. LIVINGSTONE, M.D., Medical Officer of Health.

Area in Acres, 24,527. Estimated Population, 1895, 2,700.

Birth-rate. Death-rate. Zymotic death-rate. Infant Mortality-rate.

30'3 13'7 Nil. 97

Phthisis death-rate, 1.85; Respiratory diseases death-rate, 1.48. The death-rate and infant mortality-rate, though higher than last year, are very satisfactory, as is also the absence of any zymotic mortality.

Infectious Diseases.

The Notification Act is not in force. The only case of enteric fever known was at Frosterley, Bridge End. The cause could not be detected, but the house was thoroughly disinfected. Influenza was prevalent in the early part of the year, and was fatal in two instances, while diarrhæa was prevalent during the summer, and measles during December, but fortunately without any fatal result.

General Sanitation.

The sewers at Frosterley and Rookhope have been regularly flushed, and the new sewer at Crawley-side has worked satisfactorily. Several new house drains have been connected to the Crawleyside sewer during the year, and at the Batts, Frosterley, improvements in the drainage are to be effected. The water supply at Bridge End, Frosterley, has been improved

by the erection of a storage tank, and the distribution of the Crawleyside supply has been improved. Notices were served by the Inspector of Nuisances for the abatement of 53 nuisances, and they have mostly received attention. The schools in the district have been inspected. The drainage of Frosterley North School has been improved, but new out-offices are required. The Rookhope mineshops are in the same condition as when reported last year. The district has been regularly inspected, both by the medical officer of health and by the sanitary inspector.

Sanitary Requirements.

The following recommendations are made in the report:—

- 1. The adoption of the Infectious Diseases Notification Act.
- 2. The provision of isolation hospital accommodation for the district.
 - 3. New building and sanitary bye-laws.
- 4. The purification of the sewage of the district by irrigation on land.

The report is **not** printed.

WEARDALE RURAL DISTRICT (St. John's Division).

C. C. Hewitson, M.R.C.S., Medical Officer of Health.

Areas in Acres, 36,096.

Birth-rate. Death-rate.

26.1 I 7.6*

Estimated Population, 1895, 3,400.

Zymotic death-rate. Infant mortality-rate.

1.12

^{*} Excluding 4 deaths in district not belonging thereto, but not including 2 deaths in the County Asylum belonging to the district.

Phthisis death-rate, 0.88; Respiratory diseases death-rate, 5.29. The phthisis death-rate shows a considerable decrease, but all the other mortality statistics compare somewhat unfavourably with those of the previous year.

Infectious Diseases.

The only cases of scarlet fever that came to the notice of the medical officer of health were 5 in February and 4 in March, and in all of them the disease was of a mild type, and caused no fatal result. One case of enteric fever occurred at Huntshield Ford. Whooping cough and influenza were very prevalent during the first half of the year, and caused respectively 3 and 1 deaths. Measles was so prevalent in the Lanehead district during the last month of the year that it was found necessary to close the schools for a time,

General Sanitation.

A number of nuisances arising from defective middens and accumulations of manure have been abated. The privy accommodation to some of the houses at Wearhead village has been improved.

A new water supply has been provided for the village of Cowshill, and the supply to Westgate has been augmented. Such sewers as exist in the district have been periodically flushed. Inspections of the district are stated to have been regularly made, but by whom, and with what result is not mentioned.

Sanitary Requirements.

No reference is made to these in the report. The report is **not** printed.

WEARDALE RURAL DISTRICT.

(Wolsingham Division).

T. V. Devey, L.R.C.P., Medical Officer of Health.

Area in Acres, 24,036. Estimated Population, 1895, 3,315. Zymotic death-rate. Infant Mortality-rate. Birth-rate. Death-rate. 18.4 31.0 2'II

Phthisis death-rate, 0.60; Respiratory diseases death-rate, 1.50. All the above mortality-rates, with the exception of those from phthisis and respiratory diseases, are higher than last year. There was a very large increase in the number of births. Dr. Devey is of the opinion that the estimated population of the district given above is too low.

Infectious Diseases.

Whooping cough was imported into the district during the year and caused 3 deaths. There were also 2 deaths from diphtheria, and the cause of this disease was investigated but without result. The Notification Act is not in force in the district, and there is no isolation hospital.

General Sanitation.

A new supply of water has been laid down to Thornley village, and 17 additional houses at Wolsingham have been supplied with water. The Pit Well has been much improved. The drainage of several houses at Wolsingham has been improved, but "Thornley "wants attention to its drainage." The sewage disposal land at Wolsingham is stated to be in good order, but it is recommended that a depression on the north side of the land be filled up with gravel, and that

the sanitary half pipe channel should be carried farther into the field. Inspections by both the medical officer of health and the surveyor have frequently been made, and 101 notices have been served for the abatement of nuisances arising from defective privy accommodation and drainage, accumulations of refuse, &c. The dwelling-houses in the district are stated to be kept in good order, "and all old dilapidated houses, especially "in Wolsingham, are fast disappearing." The slaughter-houses are reported to have been regularly inspected, and to have been kept clean, and more attention has been paid to the dairies.

Sanitary Requirements.

- I. The adoption of the Infectious Diseases Notification Act.
- 2. The provision of isolation hospital accommodation.
 - 3. The proper sewerage of Thornley village.
- 4. The carrying out of the recommendation in the report as to the sewage disposal works at Wolsingham.

The report is **not** printed.

PORT SANITARY DISTRICTS.

HARTLEPOOL PORT.

S. Biggart, M.D., Medical Officer of Health.

Disease on Shipboard.—The number of vessels inspected by the medical officer of health was

61, or 11 more than last year. Of these 41 had sickness on board either on arrival or during their stay in port.

Hospital.—The number of cases of infectious disease removed to the Port Sanitary hospital was 43, but only 4 of these were removed from ships. There was no case of small-pox in the Port Sanitary area during the year. The hospital is stated to be in good repair.

Emigrants.—The transmigrants numbered 2,011, the emigrants 478, and 224 alien sailors also arrived in the port, most of them on their way to foreign vessels in this and neighbouring ports.

Vessels Inspected.—The port inspector visited 1,213 vessels, also making 568 revisits, and as a result there were 97 notices served for sanitary defects. The spaces and cabins on 96 passenger and emigrant steamers were also cleansed and disinfected. The drinking water on board ship is stated to have always been carefully looked after.

RIVER TYNE PORT.

Henry E. Armstrong, D.Hy., M.R.C.S. Medical Officer of Health.

Disease on Shipboard.—The following cases were reported:—Small-pox, 4 on voyage and 5 on or after arrival in the Tyne; cholera, 21 during voyage; diarrrhœa &c., 131 during voyage and 12 on or after arrival; scarlet fever, 2 after arrival; diphtheria, 1 after arrival; enteric fever, 8 on voyage and 4 after;

suspected fever, 2 after arrival; measles, 1 after arrival; dysentery, 4 on voyage and 1 after; malarial fever, 3 on voyage and 14 after; yellow fever, 38 on voyage; fever and ague, 24 on voyage and 3 after arrival. Influenza was also reported on 39 vessels during voyage or on arrival. The number of cases admitted to the Port's floating hospital was 26, as compared with 9 in the previous year, and the only death was one from enteric fever.

Vessels from Infected Ports.—759 vessels arriving directly or indirectly from ports infected or suspected to be infected were boarded by the inspectors, and 29 vessels were visited by the medical officer of health or his assistant on account of sickness on board. No case of cholera entered the Tyne during the year.

Emigrants.—All emigrant vessels have been visited and kept under supervision while in port. The number of emigrants passing through was 276, as compared with 193 in the previous year. The forwarding of information, as to emigrants debarking and passing overland to other British ports, to the medical officers of the respective ports was continued during the year.

General Sanitary Work.—The visits paid to vessels numbered 11,757, and a large number of revisits were also made. The sanitary condition of 1,381 vessels was defective, and notices were served for the remedying of the defects.

Water Supply.—The 30 water boats were examined and found in good condition. The master of one vessel complained of the quality of the water

supplied to him at Tyne Dock. In 42 cases the water supply of ships from infected or suspected ports was changed, and the tanks purified.

Food Supply.—The food of two vessels was inspected owing to complaints from the crews, and the potatoes were found to be bad and were destroyed.

1,573 special cargoes were inspected.

Cattle Ships.—23 of these arrived in the port in a filthy condition, and they were cleansed under the supervision of the inspector.

Disinfection, &c.—Several lots of clothing and bedding were disinfected, as well as 44 vessels. 302 beds were burnt and 22 lots of filthy clothing were destroyed on account of infection.

Medical Officer of Health.—Dr. Henry Armstrong, who since 1881 has so ably discharged the duties of port medical officer, and Dr. J. F. Armstrong, the assistant medical officer, were "compelled to resign "in October last, having reason to complain of treat-"ment by the Authority that could not be called either "just or courteous." The circumstances leading to the resignation are referred to in the report.



TABLE A

Table giving Popupation, Birth-rate, Death-rate, &c., within the Urban Districts of the Administrative County of Durham.

URBAN DISTRICT	S. Medical Officer of Health.	Area.	Population, 1895 (Estimated)	Births.	Deaths.	Birth-rate.	Death-rate	Zymotic Death-rate	Infant Mortality per 1000 Births.	Phthisis Death-rate	Lung Diseases Death- rate.	Notifica- tion Act in operation?	Number of Cases Notified	Hospital accommo- dation?	Number of Cases removed 10 Hospital.	Percentage of Notified Cases removed to Hospital,	REMARKS.
BOROUGHS.																	
Darlington	J. Lawrence, M.D	 3945	41000	1193	636	29'0	15.2	2'4	169	1.3	1,2	Yes.	201	Yes.	S6	42'7	Excluding 36 deaths not belonging to the
Durham	A. M. Vann, M.R.C.S.	 880	15000	479	361	31.9	21'6*	0.03	198	2.06	4.8	Yes.	167	Yes.	61	36.2	district. Including 39 deaths occurring outside the district but belonging thereto, but excluding
Hartlepool	J. Rawlings, M.R.C.S.	 552	24000	828	428	34'5	18.2*	2'5	165	0.92	3,33	Yes.	180	Yes.	3	1.6	Including 46 deaths in Harton Workhouse
Jarrow	J. M. Nicoll, M.B.	 728	35860	1110	658	30.0	18.3*	3'06	148	1.0	4.1	Yes.	349	Yes.	99	28.3	and County Asylum belonging district but excluding 6 deaths occurring in district but
Stockton	Thomas Horne, M.D.	 2848	54000	1630	1008	30.18	18.2*	4.2	202	1.82	2'74	Yes.	969	Yes.	236	24'3	not belonging thereto. Including 18 deaths belonging to the district which occurred outside but excluding 18
West Hartlepool	S. Gonrley, M.D	 2454	50020	1741	734	34.8	16.5*	3'43	148	1'25	2.13	Yes.	283	Yes,	35	12'3	deaths in the town not belonging thereto. Including 81 deaths occurring outside the district but belonging thereto, but excluding 2 deaths in district not belonging thereto.
URBAN DISTRICT Barnard Castle	S A. H. Sevier, M.B	 533	4341	104	87	23'9	16.2*	1,38	86	0'92	3,61	Yes.	11	Yes.			* Excluding 15 deaths in district not belonging thereto.
Benfieldside	George Renton, M.D.	1525	7000	209	117	29.8	16.7*	1.7	182	1.2	2'4	Yes.	85	Yes.	6	7	* Including 1 death outside district belonging thereto.
Bishop Auckland	T. A. McCullagh, M.R.C.S.	 692	11847	424	257	35'7	19'3*	3'03	158	1'94	1'43	No.		Yes.			Excluding 28 deaths in Workhouse not belonging to district.
Blaydon	Philip Brown, M.D.	 9349	16000	560	297	35.0	18.5	3.68	212	0'93	3.68	Yes.	191	Yes.	33	17.3	ostonging to district
	es H. Smith, M.D	 6683	15504	548	310	35.3	19'9	4'25	204	0'25	5'54	Yes.	318	Yes.	84	26'4	
Consett	George Renton, M.D.	 993	8800	304	166	34'5	18.8*	3'5	167	2'2	3'7	Yes.	239	Yes.	11	4.6	* Including 3 deaths outside district but belonging thereto.
Felling	M. F. Kelly, L.F.P.S.	 2684	20000	769	446	38.4	22'3	1.85	225	1.5	4.2	Yes.	152	No.			octonging ritereo.
Hebburn	George N. Wilson, M. B.	 1180	18252	699	342	38.8	19'0*	3'38	193	1'4	3.11	Yes.	165	Yes.	38	23	* Including 12 deaths in Workhouse and County Asylum belonging to the district.
Helton-le-Hole	J. Adamson, M.D	 1618	12726	527	276	41.4	21'6	3.06	193	1.33	2'59	Yes.	108	Yes.	?		
	D. S. Park, F.R.C.S.	 1551	6670	263	162	39'4	23'8*	3,1	20 I	1'0	4.0	Yes.	94	No.			* Excluding 7 deaths in Workhouse not belonging to the district, but including 4
Leadgate	George Renton, M.D.	 .0.0	4660	186	93	39*9	19.9	2.7	177	0.6	2.2	Yes.	269	Yes.	18	6.6	deaths in County Asylum belonging thereto.
Ryton	Philip Brown, M.D.	 	6500	228	77	35.07	11'8	2'0	109	0'32	1.23	Yes.	52	No.			
Seaham Harbour	L. Gerald Dillon, M.D.	 1089	9680	408	210	42°I	21.7*	4.0	183	1.6	4.1	Yes.	114	Yes.	I	0.8	* Including 1 death in County Asylum belong-
	ley S. Fielden, M.D	 1066	9986	393	195	39'3	19.5	3.1	195	1.1	2.2	Yes.	69	No.			
Southwick	James Stobo, L.R.C.P.	 845	11295	448	211	39.6	18.6	2.83	178	1 .42	3.09	No.		Yes	15		
Spennymoor	J. C. O'Hanlon, L.R.C.S.I.	 3385	16300	656	366	40.2	22.2	2.22	234	0.92	5.03	Yes.	326	No.			
Stanhope	John Gray, M.B	 211	1900	58	54	30'5	22'6*	3.12	137	4.51	3.12	No.		No.			* Excluding 11 deaths in district not belonging thereto, but including 1 death in County
Stanley	T. Benson, L. R. C. P.	 2006	10400	373	215	35'9	20.6	2,30	241	1.23	2'98	Yes.	104	Yes.	2	19'2	Asylum belonging to district.
Tow Law	James Wild, L. R. C. P.	 470	4554	174	95	38.3	20.8	1.97	224	0.87	3'95	Yes,	34	No.			
Whickham	A. W. Attwater, L.R.C.P.	 	9740		181	38'6	17'5*	2.02	162	1.43	2'36	Yes.	47	No.			* Including 2 deaths in County Asylum belong- ing to the district, but excluding 4 deaths at
Willington	R. E. Brown, L.R.C.P.	 3795	8055	324	158	40.5	19.2	2,50	225	0.60	4'5	Yes.	100	No.			Dunston Asylum not belonging to the district.



ADMINISTRATIVE COUNTY OF DURHAM.

DEATHS AT CERTAIN AGES AND FROM CERTAIN SPECIFIED CAUSES.

		D	LATUS A	T Subjoi	NED AG	Ps.										DEAT	HS FI	ROM S	ивјог	NED (CAUSES.						
URBAN DISTRICTS.	At all Ages.		and under 5	and under	and under 25	and under 65	65 and upwards	Small-pov.	Scarlet Fever.	Diphtheria	Membranous Croup,	Typhus	Enteric or Typhoid	Con- timaed.		Puer- peral.	Cholera,	Erysipelas.	Measles.	Whouping Cough	Diarrhea and Dysentery.	Rheumatic Fever.	Phthisis,	Bronchitis, Pneumonia, and Pleurisy	Heart Disease.	Injuries.	All other Diseases.
Darlington	636	201	56	26	33	191	129		2	8	4		14							6	58		53	64	47	15	365
Durham	361	95	41	9	20	100	96		4				3						2	3	2	1	31	72	30	12	201
Hartlepool	428	137	78	21	14	114	64		I	8	5		3							25	18		23	80	23	27	215
Jarrow	658	164	129	48	36	192	89		4	8	ı		4					4	34	32	28	2	68	147	30	21	275
Stockton	1008	330	174	52	69	261	122		32	10	2	I	2 I					3		47	131	5	100	147	58	37	414
West Hartlepool	734	259	123	35	34	185	98		15	8	6	I	8	I	I			2	١	23	109		63	107	41	24	325
Barnard Castle	87	9	10	1	4	27	36				I			I						1	3		4	17	10	4	46
Benfieldside	117	38	23	1	11	29	15			I	t		3			I					7	I	11	17	7	4	64
Bishop Auckland	257	67	29	12	10	81	58		2	2	3		4						8	2	15	ı	23	17	22	I	157
Blaydon	297	119	47	10	17	58	46		1	I			10					2	2	13	32		15	59	13	7	142
Brandon & Byshottles	310	112	69	17	22	56	34		9	5	4	,	8					I	12	9	19		4	86	14	7	132
Consett	166	51	14	8	13	62	18		I	3	2		20			2		2			5		20	33	14	6	58
Felling	446	173	81	26	19	74	73		2		4		5						1	14	11	1	24	91	21	10	262
Hebburn	342	135	48	21	12	86	40		I	I			I		١			2	8	5	43	I	27	61	30	4	158
Hetton-le-Hole	276	102	43	15	II	60	45		2		2		13			1				I	21		17	33	15		171
Houghton-le-Spring	162	53	22	7	8	36	36			2	I		3				2			6	7		7	27	14	6	87
Leadgate	93	33	14	7	7	23	9		t	3			7			I			I				3	12	11	I	53
Ryton	77	25	8	3	7	13	21			3			2							2	6		2	10	8	4	40
Seaham Harbour	210	75	45	11	3	56	20		6	2			4)		6	21		16	40	13	1	101
Shildon & East Thickley	195	77	35	3	9	51	20			1			6	(11		13		11	25	7	5	116
Southwick	211	80	34	7	16	43	31			I			3	I					2		25		20	35	11	1	112
Spennymoor	366	145	58	18	24	82	39		1	3	ı		9	I		2		2	8	24	10		17	85	15		188
Stanhope	54	9	4	I	ı	22	17						2						2		2		9	6	7		26
Stanley	215	90	29	12	19	45	20		5	I	2						I	3	5	I	9		16	31	17	3	121
Tow Law	95	39	11	2	7	19	17			2	I								2	2	2		4	18	10		54
Whickham	181	62	26	10	12	43	28						I		***)	I	4	16		13	25	16		105
Willington .	158	73	18	5	9	29	24			ī			2					2	1	7	7		5	37	4	4	88
Тотаі	8140	2753	1269	388	447	2038	1245		89	74	40	2	156	4	1	7	3	23	100	233	620	12	606	1382	508	204	4076



TABLE B.

Table giving Popupation, Birth-rate, Death-rate, &c., within the Rural Districts of the Administrative County of Durham.

RURAL DISTRICTS. Medical Officer of Health.	Area.	Population, 1895 (Estimated)	Births,	Deaths.	Birth-rate.	Death-rate	Zymotic Death-rate	Infant Mortality per 1000 Births.	Phthisis Death-rate	Lung Diseases Death- rate,	Notifica- tion Act in operation?	Cacac	Hospital accommo- dation?	Number of Cases removed to Hospital.	Percentage of Notified Cases removed to Hospital.	REMARKS.
Auckland, Division I. T. A. McCullagh, M. R.C.S.	18005	28210	978	492	34'6	17.4	2.8	184	1.09	2.26	Since June 1895.	325	No.			
Do. Division II. G. W. Ellis, L.R.C.P	43393	36490	1319	612*	36.1	16.7*	2'08	170	I '04	2'30	{ Since June } 1895.	234	No.			Not including 5 deaths in County Asylum belonging to the district.
Barnard Castle (Barnard Castle Div.) A. H. Sevier, M.B	13636	1004	23	15	22'9	14'9	Nil.	87	2'0	2'0) == () (
Barnard Castle (Middleton Division) J. Atkinson, L. R.C.P	40897	3804	105	59	27.6	15.2	1.3	171	Ι 'Ο	1.3	Adoptec Decembe		No.			
Barnard Castle (Staindrop Division) James Beattie, L.R.C.P	25494	6300	154	83	24'4	13'3*	. 0.31	161	0.42	2'53) *å () (* Excluding a death ontside district belonging thereto.
Chester-le-Street J. Taylor, M.D., D.P.H.	34869	55750	2260	1103	40.2	19.7	2'27	183	0'96	3.41	Yes.	713	Yes.	37*	5·1	* From 13th July, 1895, only.
Darlington C. M. Hardy, M.B	42034	9367	198	135	21'I	14.4	1.17	141	1,58	1.81	Yes.	41	Yes.+	10	24.3	
Durham, E. Division W. A. Hepburn, M.D	15324	15409	585	310	37'9	19.7*	1,1	194	1.3	3'ι	Yes.	158	Yes.	7	4'4	Excluding 4 deaths in Sherburn Hespital not belonging to the district.
Do. W. Division E. Jepson, M.D	15730	11527	431	188	37'3	16.3	1 '47	171	0.34	4'33	Yes.	181	Yes.	16	8.8	
Easington J. Arthur, L.R.C.P., D.P.H.	36942	43097	1747	842	40.2	19.2	2.20	182	1'27	2 '94	Yes.	460	Yes.	9	1.9	
HartIepool S. Gourley, M.D	18368	2900	65	138	26.6	13.1*	3.68	123	Nil.	1.63	Yes.	32	Yes.+			* Excluding 106 deaths in Workhouse and Fever Hospital not belonging to district.
Houghton, N. Division D. S. Park, F.R.C.S	8399	13940	507	252	36.3	18.5*	1.86	197	1,36	2.94	Yes.	144	Yes.	8	5'5	* Including 2 deaths in the Workhouse be- longing to the district.
Do. S. Division J. R. Sutherland, L.R.C.S.	4791	5952	192	89	32.5	14'9	0.67	182	I '00	2'68	Yes.	37	Yes.	2	5'4	
Lanchester (Lanchester Division) J. Wilson, M.D	29956	16419	694	358	42'2	21'8	2'37	154	0.91	6'09	Yes.	549	Yes.	5	0.0	
Lanchester (Medomsley Division) W. T. Bolton, L.R.C.P	21213	7648	255	152	33'3	19.8	2'2	184	1,06	4'05	Yes.	118	Yes.	9	7.6	
Lanchester (Stanley Division) T. Benson, L.R.C.P	9543	15500	600	298	36.7	19'2	1'2	170	1.8	2'5	Yes.	201	Yes.	6	2'9	
Sedgefield G. R. Sheraton, L.R.C.P.	45011	18223	738	578	40'4	20'5*	2.08	199	1.5	2'9	Yes.	219	No.			* Excluding 204 deaths in County Asylum,
South Shields W. Armstrong, L. R. C. P.	12409	14770	455	379	30.7	15'5*	1'9	147	I' 2	2'3	Yes.	156	Yes. †	5	3*2	Excluding 151 deaths in Harton Workhouse
Stockton J. W. Blandford, L.R.C.P.	34228	12670	345	210	27'2	16.4*	1.97	176	0.22	1.88	Yes.	236	Yes.+	26	11	not belonging to the district. * Including 2 deaths ontside the district be-
Sunderland T. C. Squance, M.D., D.P.I.		18835		409	42'4	20.8*	3'7	182	1.8	3.18	Yes.	337	No.	2	0.2	longing thereto, but excluding 4 deaths not belonging the district which occurred therein. Excluding 19 deaths not belonging the dis-
Weardale								2711			37		27			trict, but including 4 deaths outside and belonging thereto.
(Derwent Division) C. J. Connon, M.B	13144	523	13	8	24.8	15.3	Nil.	Nil.	1'91	1.01	No.		No.		***	
(Stanhope Division) T. Livingstone, M.D	24527	2700	82	37	30'3	13.7	Nil.	97	1.85	1'48	No.		No.			* Fortalism of observation in the
(St. John's Division) C. C. Hewitson, M.R.C.S.	36096	3400		64	26.1	17.6*	1'17	123	0.88	5'29	No.		No.			* Excluding 4 deaths not belonging to district.
(Wolsingham Div.) T. V. Devey, L.R.C.P	24036	3315	106	62	31.9	18:4	2'11	122	0.60	1 .20	No.		No.			
		1												1		

[†] In these districts arrangemements have been made by which fever patients may be removed to the hospital in the adjoining suban district.



ADMINISTRATIVE COUNTY OF DURHAM.

DEATHS AT CERTAIN AGES AND FROM CERTAIN SPECIFIED CAUSES.

		Di	EATHS A	т Ѕивјог	NED AG	ES.										DEAT	HS F	om S	nalots	NED C	AUSES.						
RURAL DISTRICTS.	At all Ages.	Under Year.	and under	5 and under 15	and under 25	25 and under 65	65 and upwards	Small-pox.	Scarlet Fever.	Diphtheria	Membranous Croup.	Typhus		Con- tinued.	Relaps- ing.	Puer- peral.	Cholera,	Erysipelas.	Measles.	Whooping Cough	Diarrhœn and Dysentery.	Rheumatic Fever,	Phthisis,	Bronchitis, Pneumonia, and Pleurisy	Heart Disease.	fnjuries.	All other Diseases.
Auckland, Division I.	492	180	61	22	30	99	100		5		1		I 1	I		2		2	24	5	28	1	31	64	31	17	269
Do. Division II.	612	225	85	25	40	137	100		12	4	6		9						7	15	23		38	84	36	17	361
Barnard Castle (Barnard Castle Div.)	15	2	1		I	3	8							}									2	2	3		8
Barnard Castle (Middleton Division)	59	18	6		5	15	15						1							2	2	1	4	5	3		41
Barnard Castle (Staindrop Division)	83	25	5	I	6	23	23		I				I					1					3	16	11	2	48
Chester-le-Street	1103	415	171	55	55	235	172		17	4	5		16			5		3	10	14	61		54	207	86		621
Darlington	135	28	10	4	7	41	45			1	2									4	4		12	17	17	6	72
Durham, E. Division	310	114	41	8	16	78	53		1				4			1	1		5	2	4		21	48	17	12	194
Do. W. Division	188	74	34	7	10	31	32		4	1	2		I							2	7		4	50	5	8	104
Easington	842	318	145	37	49	182	111		5	ĭ	5	I	17	4		4		1	8	13	54	5	55	127	40	30	472
Hartlepool	138	15	9	5	5	52	52		2	2			8							2	10		16	11	15	2	70
Houghton, N. Division	252	100	21	5	16	65	45						9				1			3	13	ī	19	41	17	11	137
Do. S. Division	89	35	12	2	7	18	15		I		2					3		***			I		6	16	2	4	54
Lanchester (Lanchester Division) Lanchester	358	107	48	20	20	78	85		16	I	6		3			2		I	1	1	11		15	100	23		178
(Medomsley Division) Lanchester	152	47	16	9	16	31	33		I	1	2		11			2	I	1			6	I	15	31	11	3	66
(Stanley Division)	298	97	42	14	24	74	47		5		3		8					I	2		2	I	29	40	13	10	184
Sedgefield	578	147	57	14	32	216	112		6				7	•••		I		2	2	10	16	2	68	81	80	14	289
South Shields	379	77	49	9	18	133	93		2	I	1		6			1		1	I	7	25		36	86	32	13	167
Stockton	210	61	19	10	8	57	55		4	1			5			I			3	5	7	1	6	24	16	5	132
Sunderland	409	146	60	21	34	84	64		4		1		15	3	•••	1				6	41		34	60	20	13	211
Weardale (Derwent Division) Weardale	8		I	1	I	2	3																I	I	1		5
(Stanhope Division) Weardale	37	8	2	2	2	9	14																5	4	10	2	16
(St. John's Division) Weardale	64	11	6	2	3	20	22												•••	3	I		3	18	4	5	30
(Wolsingham Div.)	62	13	7	4	1	14	23			2										3	2		2	5	4	I	43
TOTAL	6873	2263	908	277	406	1697	1322		86	19	36	I	132	8		2,3	3	13	63	97	318	13	479	1138	497	175	3772



TABLE C.

Tabulated Statement of the chief Vital Statistics of the Administrative County of Durham for the year 1895, compiled from the monthly returns supplied to the County Medical Officer by the Registrars.

1000 000 000

	-					Per	Per 1,000 Population.	tion.		Deaths	Percentage
	Fopulation (Estimated 1895.)	Births.	Deaths.	Zymotic Deaths.	Birth-rate.	Birth-rate, Death-rate.	Zymotic Phthisis Death-rate	Phthisis Death-rate	Bronchitis, Pneumonia & Pleurisy Death-rate.	US	Uncertified Deaths to TotalDeaths.
Boroughs	217680	6985	3886	299	32.08	17.8	3.06	1.46	3.02	169	1.6
Urban Districts	195703	7417	4066	209	37.8	20.7	3.10	1.24	3.85	86	5.8
Rural Districts	352137	13382	6778	786	38.0	19.2	2.23	1.12	3.21	173	5.3
Administrative County	764980	27784	14730	2060	6.96	19.2	. 2.69	1.25	3.35	179	4.5
England and Wales	30394078 921860	1	568758	64901	30.3	18.7	2.14	:	•	161	2.3



INSPECTORS' REPORTS—URBAN.

Urban Districts.		Foul Conditions.	Over- crowding.	or lon.	Lodging-houses. Dairies and Milk-	shops	Bakehouses	Slaughter-houses.	Ashpits and Privies	Deposits of Refuse and Manure	Water Closets	Defective yard	No Disconnection from	aults	ter Supply	Pigstics	Animals improperly kept	Offensive Trades	Other Nuisances	TOTALS	Seizures of Unwholesome Food	Convictions for Exposing or Selling Unwholesome Food	Samples of Food and Drugs taken for Analysis	Samples of Food and Drugs found Adulterated	Samples of Water taken for Analysis	Samples of Water Condemned as unfit	Lots of Infected Bedding Stoved or Destroyed	Houses Disinfected after Infectious Disease	Schools Disinfected after Infectious Disease	Prosecutions for Exposure of Infected Persons or Things	Convictions for Exposure of Infected Persons or Things
DARLINGTON— Population, 41,000 Nuisance Inspector—	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice		8 16 24	2 2		ı				10	60 10 10 70	57 9 34 7 74 16	5 7 5 3 7	9)	 5 I	4		 2 5 2 5	570 445 951	12 cwts.		23	2			55	67			
Thomas A. Atkinson DURHAM— Population, 15,000 Nuisance Inspector—	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice		9			.			73 10 83		1		I I	3						16	}				ī			48			
James Coldwell HATLEPOOL— Population, 24,000 Nuisance Inspector—	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	6	5 9 14	2 2			.		 104 104	3	23 22 44	14 3	7 21	18	3		2 1 3		. 2	242	} 2		49	3		,	85	S2			
J. Charlton JARROW— Population, 35,860 Nuisance Inspector— Edward Batey	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	35 I	16 3 		78 Visited	Visited	3 3	32 32	78 3 78	I I	3		5 5	4	3I 3I		1		. 171		ı	2	40	I			I			I	ī
STOCKTON— Population, 54,000 Nuisance Inspector— Wm. C. Crowther	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	58 38			34 30	š 					37 4		 i 44				,			 4133	12 Hams.	1						735			
WEST HARTLEPOOL— Population, 50,020 Nuisance Inspector— Thomas Wheat	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	18	37 31 12 23 32		3	.	I		6		I	35 4 6 10 87 13.	0	I	 10				. 124 . 12 . 189		} 15		36	3	11	7	1168	138	13	I	ı
BARNARD CASTLE— Population, 4,341 Nuisance Inspector— Joseph Wade	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice		4			2 2			25	3 3	35	19	3 8 9 13 2 21	35	78 18 96					156	}							2			
Joseph Wade BENFIELDSIDE— Population, 7,000 Nuisance Inspector— John Dixon	Informal written Notices by Inspector Formal Notices by Order of Anthority Nuisances abated after Notice	1			3	.			1811							10	::: }			2077	}				I	1	2	23			
BISHOP AUCKLAND— Population, 11,847 Nuisance Inspector— R, Lindsay	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	73 3 35 72 2	64 I I I 29 I	2 					6	I	12 2 7	.	0 13 4 4 7 11	2	4 4	 I	2 2		I 10 I 9	57	}						18	20			•••
BLAYDON— Population, 16,000 Nuisance Inspector— Robert Biggins	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice		39 8 39 8	16	2	. 1		1			6		30		6		16 16			262 17 279	}						36 Stoved.	36			***
BRANDON AND BYSHOTTLES— Population, 15,504 Nuisance Inspector—	Informal written Notices by Inspector Formal Notices by Order of Anthority]		1				6 1			. 1						}				I	ī	5 Stoved, Sestroyed 6	215		ı	•••
Richard Gardner CONSETT— Population, 8,800 Nuisance Inspector—	Informal written Notices by Inspector Formal Notices by Order of Authority		47		2	5 .7	7 2	13	148		45		31		···					300	}						917 4 918 4	57			
William Rippon FELLING— Population, 20,000 Nuisance Inspector—	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	5	6 3	14			.		35		4			18		2				14	}			4	2		4	10			
J. B. Makepeace HEBBURN— Population, 18,252	Informal written Notices by Inspector Formal Notices by Order of Authority	55	3	2				ř.	78	3		14				•••)		. 5	206	}						41	41	}		
Population, 12,720	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	189 Th	Council, 5. The e scrvice wed by n	last s	ection o	of the	report	on t	his ins	pectio	on was	consi	dered b	y the	Counci	l on t	he 14	th Febr	uary, 1	896.	3	1			•••			43			•••
HOUGIITON-LE-SPRING— Population, 6,670	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisanees abated after Notice	1	5		1	·			13	30	3 3 3 1	3			2					81	1	I			3	,	12	12			
LEADGATE— Population, 4,660	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice		1			2 2				8										 14 14							•••				
RYTON— Population, 6,500	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	4	 4 3	3		I			14	2 .				8			.,. I .			90 38 66								2	I		•••
SEAHAM HARBOUR— Population, 9,680	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice			I			 I		8 3 11	.	:	د	 1				I			65 7 72					***		7 Stoved, I Destroyed	12			
SHILDON AND EAST THICKLEY— Population, 9,986 Nuisance Inspector—	Informal written Notices by Inspector Formal Notices by Order of Authority	98	. 1	4]				***	2 .	18	3 103 7 103	37		111				***	112			[4	Wherever			**
SOUTHWICK— Population, 11,295 Nuisance Inspector—	Informal written Notices by Inspector Formal Notices by Order of Authority	2	3					2	207		3 60	8 8	12		15		17			345	1						8	8			•••
SPENNYMOOR— Population, 16,300 Nuisance Inspector—	Informal written Notices by Inspector Formal Notices by Order of Authority	35 12	9	24	ı				128	 7	 5 II:	34		62		3			 41					***			2	15			
STANHOPE— Population, 1,900 Nuisance Inspector	Informal written Notices by Inspector Formal Notices by Order of Authority	1	9					4 9	11 4		I		ļ	8														5			
STANLEY — Population, 10,400 Nuisance Inspector—	Informal written Notices by Inspector Formal Notices by Order of Authority	65 10 I	4 15																	65 46 75			•••	}							
Joseph Routledge TANFIELD— Population, 7,060 Nnisance Inspector— R. Heslop	Informal written Notices by Inspector Formal Notices by Order of Authority Naisances abated after Notice	3 4	6 4	9		I	l		23	36							3)								4			
TOW LAW— Population, 4,554 Niisance Inspector— W. Garraway	Informal written Notices by Inspector Formal Notices by Order of Authority		:(:)									. 7								,	This re	turn is 1	made in	such a	mann	er that i	t cannol	be pro	perly su	ımmaria	ed
WHICKHAM— Population, 9,740 Nuisance Inspector— John Dinsdale	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	4 ,	 7			(···	2	 9	56	50 .	 I I;				2		2			50											
WILLINGTON— Population, 8,055 Nuisance Inspector— John Cooke	Informal written Notices by Iuspector Formal Notices by Order of Authority	I I	1 2					۱ 	38			. 9	ļ	I			I		24	91						***		2			



INSPECTORS' REPORTS—RURAL.

		DWELL	ис-Но Ѕсноо			Milk-	ds	ses	ouses.	. nd	Refuse	sets.	ži	Hous	E DRAL	NAGE	pply	*	roperly	Trades	Nuisances	ances	,	of c Food	Selling e Food	n for	ood and erated	Water	Water as unfit	ected ved or	nfected ious	rected	ns for Infected Things	ns for Infected Things
RURAL DISTRICTS.		Foul Conditions. Structural	Over- crowding.	Unfit for Habitation.	Lodging-ho	Dairies and shops	Cowsheds	Bakehou	Slaughter-h	Ashpits a Privies	120	Water Cl	Defective	Defective Traps.	No Disconner tion from Sewers	Other Faults	Water Su	Pigsties	Animal, improperly kept	9		Other Nuis	TOTAL	Seizures Unwholesome	Convictions f Exposing or Sel Unwholesome F	Samples of Food a Drugs taken fo Analysis	Samples of Fo Drugs found Adulb	Samples of Water taken for Analysis	Samples of V Condemned a	Lots of Infecte Bedding Stoved Destroyed	Houses Disinfec after Infection Disease	Schools Disinfec after Infectious Disease	Prosecution Exposure of I Persons or 7	Convictions Exposure of I Persons or J
AUCKLAND— Population, 64,700 Nuisance Inspector— Christopher Johnston	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	448	4	4	1 I				I 3	98 121 14	042 187 157		117 47 38	226		216 111 58	4 16 10	 20 	1 1		3	18 2 31 1 30 1		}						4	4			
Christopher Johnston BARNARD CASTLE— Population, 11,108 Nuisance Inspector— Robert Graham	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice		.									2 2	:::	6	2 2		8 8	I I					43	}		•••		6	1		I			
CHESTER-LE-STREET— Population, 55,750 Nuisance Inspectors— Herbert Webb & G. Deveron	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice		7 4	10 48 52	2 2		12		3 I 3	34	6 17	9 6 14	4	14 5 16	6 1 7	23 3 20	2 I 3	6 I 7			1	7	354 138 356	} 3	I			5	3		138	••	3	3
DARLINGTON— Population, 9.367 Nuisance Inspector— Thomas R. Croad	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	4	ı ا	2						3	 I	П		19 19	6	29 3 23	85 I 44		2 I 2			I	203 23 151] 1				24	4	10	10			
	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	149 260 	. 3				5 3		6	2	I	3 2		38 31	14 11	64 54	15 14		18 5			3 I, 2 3	375 95 924	}				4	3	•••	155			
EASINGTON— Population, 43,097 Nuisance Inspector— George Phalp	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice		.		 I 	 I				30	1		:::		10			20 20		1	20		62 280	}				3	3	2	10			
HARTLEPOOL— Population, 2,440 Nuisance Inspector— R. Dunipace	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	4	1							12 10	2		8 2 8	 7	2 I 2	18 4 18	2 2		1 I	 I			11 I 11 105	}			•••	2			11	1		
HOUGHTON— Population, 19,892 Nnisance Inspector— William Morley	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	19 4 12 3 25 6	2 3	10 6	I I		4 4		"	44 26 57	15 8 17	2 2	7 5 10	6 6 8	6 1 6	40 26 54	3 5 4	8 3 9	11 6 13			4	242 143 308	} '				11	3	11	34			
LANCHESTER— Population, 32,507 Nuisance Inspector— John E. Parker	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	2 12: 2 59:	 7 3 4 3	6 5 45	2 5 5	I	5 3 8		6	180 97 586	3 11 14		 6 75		16 16 59		4 9 65	4 3 10	2 I 3	 I	1	19	520 305 592	}				17	6	I	9	2	•••	•••
SEDGEFIELD— Population, 18,223 Nuisance Inspector— William Snowdon	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice		5			230			250 I			10	90 90		55		50	25	70		1	329 66 130 6	115	}				6	ı	3	2	***		•,,
SOUTH SHIELDS— Population, 14,770 Nuisance Inspectors— James Voung & W. WeIsh	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	17 1 4 2 17 2	7 1	8		7 14 8			2	9 24 27	6 5 10	4 2 5	8 9 13	26 11 27	8 8	19 7 18	5 14 14	2 2	4 4		21	31	341 167 400	}				3	3	57	78	1		***
	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice		55 37 89			Regul Inspec	arly ted.		pec								0 0				:			}				8	2		139	3		
*SUNDERLAND— Population, 18,835 Nuisance Inspector— G. H. Humble	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice		3 1			4	4		I	34 	10	I I 	12 4 	16				12 12					224 114	}		•••		2		2				•••
WEARDALE— Population, 9,938 Nuisance Inspector W. Morley Egglestone	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice		75	. ĭ						79 2 75	49 47	 5	 :					2 2				2	187 5 177	}				2	ı		5	+ #	,	

^{*} The Inspector has only held office since August, and the return is only for the period from August to December.





